ROY COOPER Governor MICHAEL S. REGAN Secretary MICHAEL ABRACZINSKAS



XX

Mr. Terry Nealy Plant Manager CPI USA North Carolina LLC 331 Allie Clay Road Roxboro, NC 27573-1153

SUBJECT: Air Quality Permit No. 05856T21

Facility ID: 7300056

CPI USA North Carolina LLC Roxboro, Person County

Fee Class: Title V PSD Class: Major

Dear Mr. Nealy:

In accordance with your completed Air Quality Permit Application for a PSD major modification of your Title V permit received April 26, 2019, we are forwarding herewith Air Quality Permit No. 05856T21 to CPI USA North Carolina LLC, 331 Allie Clay Road, Roxboro, North Carolina, authorizing the construction and operation, of the emission source(s) and associated air pollution control device(s) specified herein. Additionally, any emissions activities determined from your Air Quality Permit Application as being insignificant per 15A North Carolina Administrative Code 02Q .0503(8) have been listed for informational purposes as an "ATTACHMENT." Please note the requirements for the annual compliance certification are contained in General Condition P in Section 3. The current owner is responsible for submitting a compliance certification for the entire year regardless of who owned the facility during the year.

As the designated responsible official, it is your responsibility to review, understand, and abide by all of the terms and conditions of the attached permit. It is also your responsibility to ensure that any person who operates any emission source and associated air pollution control device subject to any term or condition of the attached permit reviews, understands, and abides by the conditions of the attached permit that are applicable to that particular emission source.

If any parts, requirements, or limitations contained in this Air Quality Permit are unacceptable to you, you have the right to request a formal adjudicatory hearing within 30 days following receipt of this permit, identifying the specific issues to be contested. This hearing request must be in the form of a written petition, conforming to NCGS (North Carolina General Statutes) 150B-23, and filed with both the Office of Administrative Hearings, 6714 Mail Service Center, Raleigh, North Carolina 27699-6714 and the Division of Air Quality, Permitting Section,



Mr. Terry Nealy xx Page 2

1641 Mail Service Center, Raleigh, North Carolina 27699-1641. The form for requesting a formal adjudicatory hearing may be obtained upon request from the Office of Administrative Hearings. Please note that this permit will be stayed in its entirety upon receipt of the request for a hearing. Unless a request for a hearing is made pursuant to NCGS 150B-23, this Air Quality Permit shall be final and binding 30 days after issuance.

You may request modification of your Air Quality Permit through informal means pursuant to NCGS 150B-22. This request must be submitted in <u>writing</u> to the Director and must identify the specific provisions or issues for which the modification is sought. Please note that this Air Quality Permit will become final and binding regardless of a request for informal modification unless a request for a hearing is also made under NCGS 150B-23.

The construction of new air pollution emission source(s) and associated air pollution control device(s), or modifications to the emission source(s) and air pollution control device(s) described in this permit must be covered under an Air Quality Permit issued by the Division of Air Quality prior to construction unless the Permittee has fulfilled the requirements of NCGS 143-215.108A(b) and received written approval from the Director of the Division of Air Quality to commence construction. Failure to receive an Air Quality Permit or written approval prior to commencing construction is a violation of GS 143-215.108A and may subject the Permittee to civil or criminal penalties as described in GS 143-215.114A and 143-215.114B.

Person County has triggered increment tracking under PSD for PM₁₀ and SO₂. This modification will result in a decrease of 1.37 lbs/hr of PM₁₀ and 106.85 lbs/hr of SO₂.

This Air Quality Permit shall be effective from xx until August 31, 2021, is nontransferable to future owners and operators, and shall be subject to the conditions and limitations as specified therein.

Should you have any questions concerning this matter, please contact Rahul P. Thaker, P.E., QEP, at (919) 707-8740 or rahul.thaker@ncdenr.gov.

Sincerely yours,

William D. Willets, P.E., Chief, Permitting Section Division of Air Quality, NCDEQ

c: Kelly Fortin, EPA Region 4
Raleigh Regional Office
Central Files
Connie Horne (cover letter only)

ATTACHMENT to Air Quality Permit No. 05856T21

Insignificant Activities under 15A NCAC 02Q .0503(8)

Emission Source ID	Emission Source Description	
IES1	Diesel fired 340 hp emergency fire pump	
IES2	Diesel fuel oil storage tank	
IES3	Fire pump fuel oil storage tank	
IES4	250 gallon gasoline storage tank	
IES5	Solvent parts cleaner	
IES6	Turbine lube oil tank vent	
IES10	Paved haul roads	
IES11	Wood handling and storage	
IES12	TDF handling and storage	
IES15	Truck delivery of coal	

- 1. Because an activity is insignificant does not mean that the activity is exempted from an applicable requirement or that the Permittee is exempted from demonstrating compliance with any applicable requirement.
- 2. When applicable, emissions from stationary source activities identified above shall be included in determining compliance with the permit requirements for toxic air pollutants under 15A NCAC 02D .1100 "Control of Toxic Air Pollutants" or 02Q .0711 "Emission Rates Requiring a Permit."
- 3. For additional information regarding the applicability of MACT or GACT see the DAQ page titled "Specific Permit Conditions Regulatory Guide." The link to this site is as follows: http://deq.nc.gov/about/divisions/air-quality/air-quality-permits/specific-permit-conditions-regulatory-guide.

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Summary of Changes to Permit

The following changes were made to the CPI USA North Carolina LLC, Roxboro, NC, Air Quality Permit No. 05856T20:

Old Page No.	New Page No.	Condition Number	Changes
Air Quality Permit No. 05856T20	Air Quality Permit No. 05856T21		
3	3	Section 1 Table	Remove applicability / heading of "PSD Avoidance" for boilers (ES-1-1A, 1B, and 1C) as it is erroneous. Remove approval of three SNCR systems (CD-1-7A, 7B, and 7C) and the associated footnote 5 as per the applicant request.
4	4	Section 2.1 Table	Replace "Compliance Assurance Monitoring" with "See Section 2.1A.6." for limits/standards for applicable requirement of 15A NCAC 02D .0614. Remove applicable requirement in 02D .0530(u). Include applicability of 02D .1111 for 5D NESHAP.
6	5	Section 2.1.A.1.c. and d.	Remove coal sulfur content monitoring and revise the reporting to state that compliance with Sections 2.1A.4.dd. and ee. will be sufficient to ensure compliance with 02D .0516.
7	6	Section 2.1.A.2.c. and d.	Consolidate these provisions as both mass-based emission limit and opacity limit are part of standards for particulate matter, the regulated pollutant under NSPS, and renumber them Section 2.1.A.2.b. Include PM standards for "modified" boilers.
6	6	Section 2.1.A.2.b.i.	Include a new PM testing requirement for the modified boilers.
8	8	Section 2.1.A.3.a. through d.	Clarify that the limits for various pollutants in 02D .0501(c) apply during all periods of operation (normal, startup, shutdown, and malfunction). Also clarify the averaging periods as follows: PM ₁₀ : 3-hour average using stack test SO ₂ : 24-hour block average using CEMS NO _x : 30-day rolling average using CEMS CO: 30-day rolling average using CEMS.
8	8	Section 2.1.A.3.e.	Clarify that the averaging period for sulfur content of coal is total shipment average.
9	9	Section 2.1.A.3.j.	Clarify that monitoring and recordkeeping under Section 2.1.A.3.cc. shall apply for SO ₂ and no coal sulfur content monitoring shall be required. Include a compliance determination statement that if any 24-hour block average exceeds the

Old Page No. Air Quality Permit No. 05856T20	New Page No. Air Quality Permit No. 05856T21	Condition Number	Changes
			SO2 emission limit, the Permittee shall be deemed in non-compliance.
9	-	Section 2.1.A.3.n.	Remove reporting for coal sulfur content.
-	9	Section 2.1.A.3.o.	Include this new provision on reporting of SO ₂ emissions per Section 2.1.A.3.dd. and ee.
-	9	Section 2.1.A.3.p.	Include this new provision on reporting of CO emissions per Section 2.1.A.4.o.
10	10	Section 2.1.A.3.aa.	Correct the typo for SO ₂ limit of 332.5 lbs/hr (currently written as 322.5 lbs/hr).
10	10,11	Section 2.1.A.4.a. through e.	Clarify that the BACT for various pollutants in 02D .0530 apply during all periods of operation (normal, startup, shutdown, and malfunction). Also clarify the averaging periods as follows: PM ₁₀ : 3-hour average using stack test SO ₂ : 24-hour block average using CEMS NO _x : 30-day rolling average using CEMS CO: 30-day rolling average using CEMS Sulfuric acid mist: 3-hour average using stack test.
-	11	Section 2.1.A.4.g.	Include this new provision for a BACT for the 2009 project for CO as a 30-day rolling average (CEMS) which apply during all periods of operation (normal, startup, shutdown, and malfunction).
11	11	Section 2.1.A.4.h.	Renumber it as Section 2.1A.4.i. Clarify that for complying with BACT for particulate matter (PM ₁₀), SO ₂ , and NOx, the Permittee shall follow the monitoring and recordkeeping requirements in Section 2.1.A.3.g. through i., Section 2.1 A.4.cc., and Section 2.1.A.3.k., respectively.
11	11	Section 2.1.A.4.i.	Replace the CO CEMS requirement per Section 2.1.A.7.k. (non-applicable §112(j) requirement) with Section 2.1.A.8.p.
-	11	Section 2.1.A.4.1.	Include a new provision clarifying that no monitoring for sulfur content of coal and sulfuric acid mist emissions shall be required.
11	-	Section 2.1.A.4.k.	Remove reporting for sulfur content of coal.
11	11	Section 2.1.A.4.1.	Renumber it as Section 2.1.A.4.m. Clarify that reporting requirements in Section 2.1.A.3.m. and n. shall be sufficient to ensure compliance with PM ₁₀ BACT in Section 2.1.A.4.a.

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Old Page No.	New Page No.	Condition Number	Changes
Air Quality	Air Quality		
Permit No.	Permit No.		
05856T20	05856T21		
11	12	Section 2.1.A.4.n. and o.	Remove and consolidate them as Section
			2.1.A.4.p., and clarify that the reporting
			requirements in Section 2.1.A.3.q. and r. shall be
			sufficient to ensure compliance with NOx BACT
			in Section 2.1.A.4.c.
12-14	-	Section 2.1.A.5.	Remove this non-applicable requirement.
14-16	12-15	Section 2.1.A.6.	Renumber it as Section 2.1.A.5. Remove the
			incorrect applicable requirement of 02Q .0317
			with less than 61 tons per consecutive 12-month
			limit for PM ₁₀ .
16 through 25	-	Section 2.1.A.7.	Remove this non-applicable requirement.
25 and 26	14-15	Section 2.1.A.8.	Renumber it as Section 2.1.A.6. and change all
			references accordingly.
26	15	Section 2.1.A.9.	Renumber it as Section 2.1.A.7. and change all
			references accordingly.
26 through 29	15 through 19	Section 2.1.A.10.	Renumber it as Section 2.1.A.8. and change all
			references accordingly.
36 through 45	26 through 34	General Conditions	Include the latest set of general conditions
			(version 5.3, 8/21/18).



State of North Carolina Department of Environmental Quality Division of Air Quality

AIR QUALITY PERMIT

Permit No.	Replaces Permit No.	Effective Date	Expiration Date
05856T21	05856T20	<mark>xx</mark>	August 31, 2021

Until such time as this permit expires or is modified or revoked, the below named Permittee is permitted to construct and operate the emission source(s) and associated air pollution control device(s) specified herein, in accordance with the terms, conditions, and limitations within this permit. This permit is issued under the provisions of Article 21B of Chapter 143, General Statutes of North Carolina as amended, and Title 15A North Carolina Administrative Codes (15A NCAC), Subchapters 02D and 02Q, and other applicable Laws.

Pursuant to Title 15A NCAC, Subchapter 02Q, the Permittee shall not construct, operate, or modify any emission source(s) or air pollution control device(s) without having first submitted a complete Air Quality Permit Application to the permitting authority and received an Air Quality Permit, except as provided in this permit.

Permittee: CPI USA North Carolina LLC

Facility ID: 7300056

Facility Site Location: 331 Allie Clay Road

City, County, State, Zip: Roxboro, Person County, North Carolina 27573

Mailing Address: P. O. Box 1153

City, State, Zip: Roxboro, North Carolina 27573

Application Numbers: 7300056.17A Complete Application Date: April 26, 2019

Primary SIC Codes: 4911

Division of Air Quality Raleigh Regional Office Regional Office Address: 3800 Barrett Drive

Raleigh, North Carolina 27609

Permit issued this the XX day of XXXXX, XXXX.

William D. Willets, P.E., Chief, Permitting Section By Authority of the Environmental Management Commission

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SECTION 1: PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

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2.1 Emission Sources Specific Limitations and Conditions (Including specific requirements, testing, monitoring, recordkeeping, and reporting requirements)

SECTION 3: GENERAL PERMIT CONDITIONS

ATTACHMENT

List of Acronyms

SECTION 1 - PERMITTED EMISSION SOURCE(S) AND ASSOCIATED AIR POLLUTION CONTROL DEVICE(S) AND APPURTENANCES

The following table contains a summary of all permitted emission sources and associated air pollution control devices

and appurtenances:

Page Nos.	Emission Source ID No.	Emission Source Description	Control Device ID No.	Control Device Description
4 - 28	ES-1-1A ES-1-1B ES-1-1C (PSD ,	One electricity generating unit consisting of: Three watertube design coal/natural gas/No. 2 and No. 4 fuel oil/tire derived fuel/unadulterated wood/	CD-1-1A CD-1-1B CD-1-1C	Three bagfilters (16,800 square feet of filter area, each)
	NSPS Db, SB3 BACT, MACT DDDDD ¹)	unadulterated biomass/adulterated engineered wood²/pelletized paper fuel/flyash briquette/ creosote treated wood³-fired steam, electric generating, boilers (220 million Btu per hour maximum heat input capacity, each)	CD-1-5A CD-1-5B CD-1-5C CD-1-6A CD-1-6B CD-1-6C	Three rotating overfire air (ROFA) systems Three furnace sorbent injection (FSI) systems
28 - 29	ES-2A through ES- 2C (PSD)	Three coal bunkers	CD-2A through CD-2C	Three bagfilters (161 square feet of filter area each, respectively)
28 - 29	ES-3 (PSD)	One flyash silo with wet slurry pugmill for unloading or dry unloading system	CD-3	One silo binvent (100 square feet of filter area)
28 - 29	ES-4 (PSD)	One bottom ash silo with wet slurry pugmill for unloading	CD-4	One silo binvent (528 square feet of filter area)
28 - 29	ES-5A and ES-5B (PSD)	Two ash system vacuum transport pumps	CD-5E	One simple cyclone (42 inches in diameter), located on the bottom ash silo
			CD-5D	One simple cyclone (42 inches in diameter), located on the flyash silo
			CD-5C	One bagfilter (528 square feet of filter area), located on the flyash silo
			CD-5A and CD- 5B	Two in-line filters (one per pump)
29 - 31	ES-6 (PSD)	Coal unloading/storage and transfer	Wetsup	Wet suppression/chemical binder
31 - 32	ES-7	One cooling tower (32,400 gallons per minute recirculating water flow rate)	None	-
32 - 33	ES-8	One alkaline sorbent (limestone, lime or trona) silo (12,554 ft³ maximum storage capacity)	CD-8	Vent fabric filter (230 square feet of filter area)

SECTION 2 - SPECIFIC LIMITATIONS AND CONDITIONS

¹ The Permittee shall comply with 40 CFR Part 63, Subpart DDDDD, "National Emission Standards for Hazardous Air Pollutants for Industrial, Commercial, and Institutional Boilers and Process Heaters," beginning **May 20, 2019**.

² It includes plywood, medium density fiberboard, oriented strand board, particleboard, and other similar materials that may contain phenolic resins.

³ Creosote treated wood including railroad ties and utility poles as defined in the approved NHSM determination. (Reference: http://ncair.org/permits/memos/NHSM Determination CPI Roxboro.pdf)

2.1 - Emission Source(s) and Control Devices(s) Specific Limitations and Conditions

The emission source(s) and associated air pollution control device(s) and appurtenances listed below are subject to the following specific terms, conditions, and limitations, including the testing, monitoring, record keeping, and reporting requirements as specified herein:

A. One electricity generating unit consisting of:

Three watertube design coal/natural gas/No. 2 and No. 4 fuel oil/tire derived fuel/unadulterated wood/unadulterated biomass/adulterated engineered wood/pelletized paper fuel/flyash briquette/creosote treated wood-fired boilers (ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C), and associated bagfilters (ID Nos. CD-1-1A, CD-1-1B, and CD-1-1C), rotating overfire air (ROFA) systems (ID Nos. CD-1-5A, CD-1-5B, and CD-1-5C) and furnace sorbent injection (FSI) systems (ID Nos. CD-1-6A, CD-1-6B, and CD-1-6C)

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	2.3 pounds per million Btu heat input per boiler*	15A NCAC 02D .0516
Particulate matter	When burning coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels	15A NCAC 02D .0524 (40 CFR 60, Subpart Db) (60.43b(h)(1) and (3))
	0.030 lb/million Btu heat input per boiler* or	
	0.051 lb/million Btu heat input per boiler* and 0.2 percent of combustion concentration (99.8 percent reduction)	
	When burning greater than 30 percent wood (by heat input) on an annual basis	
	0.10 lb/million Btu heat input per boiler*	
	20 percent (6-minute average) per common stack	15A NCAC 02D .0524 (40 CFR 60, Subpart Db) (60.43b(f))
Nitrogen oxide	Coal-firing 0.60 pounds per million Btu heat input per boiler*	15A NCAC 02D .0524 (40 CFR 60, Subpart Db) (60.44b(a))
	Simultaneously burning coal with fuel oil or a mixture of these fuels with natural gas or any other fuel (per boiler*):	15A NCAC 02D .0524 (40 CFR 60, Subpart Db) (60.44b(c))
	$E_n = (0.1H_{go} + 0.3H_{ro} + 0.6H_c)/(H_{go} + H_{ro} + H_c)$	
	Where:	
	$ \begin{aligned} En &= & \text{nitrogen oxide emission limit (lbs/mmBtu)} \\ H_{go} &= & \text{heat input from the combustion of natural gas or} \\ &= & \text{distillate oil (mmBtu)} \end{aligned} $	
	H _{ro} = heat input from the combustion of residual oil (mmBtu)	
DM	H _c = heat input from the combustion of coal (mmBtu)	15 A NCAC 02D 0501(-)
PM ₁₀ Sulfur dioxide	5.94 pounds per hour per boiler* 332.2 pounds per hour per boiler*	15A NCAC 02D .0501(c) 15A NCAC 02D .0501(c)
Nitrogen oxide	121.0 pounds per hour per boiler*	15A NCAC 02D .0501(c)
Carbon monoxide	121.0 pounds per hour per boiler*	15A NCAC 02D .0501(c)
Particulate matter	0.027 pounds per million Btu heat input per boiler* [1987 Project]	15A NCAC 02D .0530

Regulated Pollutant	Limits/Standards	Applicable Regulation
Sulfur dioxide	1.51 pounds per million Btu heat input per boiler* [1987 Project]	15A NCAC 02D .0530
Nitrogen oxide	0.55 pounds per million Btu heat input per boiler* [1987 Project]	15A NCAC 02D .0530
Carbon monoxide	0.55 pounds per million Btu heat input per boiler* [Both 1987 Project and 2009 Project]	15A NCAC 02D .0530
Sulfuric acid mist	0.021 pounds per million Btu heat input per boiler* [1987 Project]	15A NCAC 02D .0530
Particulate matter	See Section 2.1.A.5.	15A NCAC 02D .0614
Particulate matter less than 10 microns in diameter (PM ₁₀) / Particulate matter less than 2.5 microns in diameter (PM _{2.5})	0.027 pounds per million Btu heat input per boiler*	North Carolina General Statute 62-133.8(g) "Control of Emissions" Senate Bill 3 (SB3) Best Available Control Technology (BACT)
Nitrogen oxides	0.55 pounds per million Btu heat input per boiler* (30 day)	
Carbon monoxide Sulfuric acid mist Sulfur dioxide	0.55 pounds per million Btu heat input per boiler* (30 day) 0.021 pounds per million Btu heat input per boiler* 1.51 pounds per million Btu heat input per boiler* (TDF) Burning inherently low sulfur biomass (wood)	
Volatile organic compounds	Burning biomass Good Combustion Practices	
Mercury	5.00 E-6 pounds per million Btu heat input per boiler*	
Nitrogen oxide Sulfur dioxide	As defined in specific conditions	40 CFR Part 97, Subpart AAAAA "TR NOx Annual Trading Program", Subpart BBBBB "TR NOx Ozone Season Trading Program", and Subpart CCCCC "TR SO ₂ Group 1 Trading Program".
HAPs	See Section 2.1.A.8.	Federal-only requirement 15A NCAC 02D .1111 (40 CFR 63, Subpart DDDDD)

^{*} Stack measured or calculated emissions represent the collective emissions for the three boilers (ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C) in the power unit. "Per boiler" emissions are derived by dividing the measured emissions by the boilers in operation during the timeframe specified. Compliance certification on a per boiler basis is based on the common stack emissions performance divided by the boilers in operation at the time of measurement per power unit.

1. 15A NCAC 02D .0516: SULFUR DIOXIDE EMISSIONS FROM COMBUSTION SOURCES

a. Emissions of sulfur dioxide from these sources (ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C) shall not exceed 2.3 pounds per million Btu heat input. Sulfur dioxide formed by the combustion of sulfur in fuels, wastes, ores, and other substances shall be included when determining compliance with this standard. [15A NCAC 02D .0516]

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 A.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

c. The Permittee shall determine compliance with SO₂ emission limit in Section 2.1 A.1.a. above using SO₂ CEMS. Monitoring and record keeping for SO₂ CEMS shall be in accordance with 2.1.A.4.cc. below. If any 24-hour block average of SO₂ exceeds the emission limit per Section 2.1 A.1.a. above or the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0516.

Reporting [15A NCAC 02Q .0508(f)]

d. Reporting requirements in Section 2.1 A.4.dd. and ee. shall be sufficient to ensure compliance with SO₂ emission limit in Section 2.1 A.1.a. above.

2. 15A NCAC 02D .0524: NEW SOURCE PERFORMANCE STANDARDS

a. The Permittee shall comply with all applicable provisions, including the testing, reporting, recordkeeping, and monitoring requirements contained in Environmental Management Commission Standard 15A NCAC 02D .0524 "New Source Performance Standards (NSPS)" as promulgated in 40 CFR Part 60 Subpart Db, including Subpart A "General Provisions." [15A NCAC 02D .0524]

Emission Limitations [15A NCAC 02D .0524]

- b. Particulate matter
 - i. When burning coal, oil, wood, a mixture of these fuels, or a mixture of these fuels with any other fuels, particulate emissions from these sources (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 0.030 lb/million Btu heat input (3-run stack test average), or 0.051 lb/million Btu heat input and 0.2 percent of combustion concentration (99.8 percent reduction) (3-run stack test average).
 - ii. When burning greater than 30 percent wood (by heat input) on an annual basis, particulate emissions from these sources (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 0.10 lb/million Btu heat input (3-run stack test average).
 - iii Each source (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not cause to be discharged into the atmosphere any gases that exhibit greater than 20 percent opacity (six-minute average), except for one six-minute period per hour of not more that 27 percent opacity.
 - iv. The PM including opacity standards shall apply at all times, except during periods of startup, shutdown, or malfunction.

[$\S 60.43b(f)$, (g), and (h)(1) and (3)]

- c. Nitrogen oxides
 - i. Nitrogen oxides emissions when firing coal in these sources (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 0.60 pounds per million Btu heat input.
 - ii. Nitrogen oxides emissions from the simultaneous combustion of coal with fuel oil or a mixture of these fuels with natural gas or any other fuel in these sources (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not be in excess of the rate calculated by the following formula [40 CFR Part 60, Subpart 60.44b(c)]

$$E_n = (0.1 H_{\rm go} + 0.3 H_{\rm ro} + 0.6 H_{\rm c}) / (H_{\rm go} + H_{\rm ro} + H_{\rm c})$$

Where: $E_n = \text{nitrogen oxide emission limit (lb/million Btu)}$

 H_{go} = heat input from combustion of natural gas or distillate oil (million Btu)

 H_{ro} = heat input from the combustion of residual oil (million Btu)

 H_c = heat input from the combustion of coal (million Btu)

- iii. Compliance with the nitrogen oxide emission limits using CEMS is determined on a 30-day rolling average basis.
- iv. The NOx emission standards shall apply at all times.

 $[\S\S60.44b(a), (b), (h), and (i)]$

d. **Testing** [15A NCAC 02Q .0508(f)]

i. The Permittee shall conduct a performance test for PM emission standards in Section 2.1.A.2.b. above for boilers (ID No. ES-1-1A, ES-1-1B and ES-1-1C) in accordance with General Condition JJ, and §60.8 and §§60.46b(b) and (d), within 180 days of issuance of air quality permit 05856T21. The Permittee shall also conduct any subsequent performance test, if requested by DAQ for PM emission standards, in accordance with General Condition JJ, and §60.8 and §§60.46b(b) and (d). If the results of any tests are above the limits given in Section 2.1.A.2.b. above or any required performance test is not conducted, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524.

ii. <u>Before Modifying or Replacing Existing induced Draft Fans on Boilers (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C)</u>

The Permittee shall conduct a performance test for particulate matter within 60 days of achieving the maximum production rate at which the affected facility (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C) will be operated but no later than 180 days after the startup of the furnace sorbent injection (FSI) systems on boilers (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C) in accordance with General Condition JJ found in Section 3. This testing shall be used consistent with 40 CFR 60 Appendix C when the facility performs stack testing pursuant to Section 2.1 A.2.b.ii. below.

Prior to modifying/replacing the induced draft fans on boilers (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C), the Permittee shall perform an engineering evaluation demonstrating that the increase in flue gas flow rate will not increase the boiler's potential heat input rate when firing 100% coal, 50% coal/50% TDF, and 25% coal/50% TDF/25% wood, to greater than 250 million Btu/hr. The Permittee shall submit the results of this engineering evaluation 60 days prior to modification/replacement of the induced draft fans on these boilers.

iii. After Modifying or Replacing Existing Induced Draft Fans on Boilers (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C)

The Permittee shall conduct a performance test for particulate matter within 60 days of achieving the maximum production rate at which the affected facility (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C) will be operated but no later than 180 days after the startup of the modified/replaced induced draft fans on boilers (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C) in accordance with General Condition JJ found in Section 3. If the results of this performance test, consistent with 40 CFR 60 Appendix C, demonstrate that increase in particulate matter has occurred at boilers (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C) or the above performance test is not conducted, the modified boilers (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C) are subject to the applicable requirements for particulate matter (category: boilers modified after February 28, 2005) in accordance with 40 CFR 60 Subpart Db.

Within 60 days of achieving the maximum production rate at which the affected facility (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C) will be operated but no later than 180 days after the startup of the modified/replaced induced draft fans on boilers (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C), the Permittee shall determine, in accordance with General Condition JJ found in Section 3, the maximum heat input capacity for each boiler (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C) when firing 100% coal, 50% coal/50% TDF and 25% coal/50% TDF/25% wood, based upon a 4-hour averaging period at a maximum fan capacity. If this demonstration indicates that the maximum heat input capacity exceeds 250 million But/hr for any boiler, the boilers (ID Nos. ES-1-1A, ES-1-1B and ES-1-1C) shall become subject to the requirements in 40 CFR 60 Subpart Da.

Monitoring [15A NCAC 02Q .0508(f)]

- e. 40 CFR 60.48b(a) The Permittee shall calibrate, maintain, and operate a continuous monitoring system for measuring the opacity of emissions discharged to the atmosphere and record the output of the system.
- f. 40 CFR 60.48b(b) The Permittee shall calibrate, maintain, and operate a continuous monitoring system for measuring nitrogen oxide emissions discharged to the atmosphere and record the output of the system. Data

reported to meet the requirements of §60.49b shall not include data substituted using the missing data procedures in Subpart D of Part 75 of 40 CFR, nor shall the data have been bias adjusted according to the procedures of Part 75 of 40 CFR.

- g. 40 CFR 60.48b(c) operation of nitrogen oxide continuous monitoring systems and data recording.
- h. 40 CFR 60.48b(d) measurement of nitrogen oxide 1-hour averages.
- i. 40 CFR 60.48b(e) installation, evaluation, and operation of continuous monitoring systems.
- j. 40 CFR 60.48b(f) continuous monitoring systems breakdowns, repairs, calibration checks and zero and span adjustments.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the monitoring requirements in Sections 2.1 A.2.e. through j. above, are not complied with.

Recordkeeping [15A NCAC 02Q .0508(f)]

- k. 40 CFR 60.49b(b) performance test data for PM for each performance test.
- 1. 40 CFR 60.49b(d) recordkeeping of the amounts of each fuel fired each day.
- m. 40 CFR 60.49b(e) quarterly recordkeeping of the nitrogen content of the residual oil (if burned).
- n. 40 CFR 60.49b(f) recordkeeping of the opacity.
- o. 40 CFR 60.49b(g) daily recordkeeping of the nitrogen oxide emission rates and supporting data.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0524 if the recordkeeping requirements in Sections 2.1.A.2.k. through o. above, are not complied with.

Reporting [15A NCAC 02Q .0508(f)]

p. The Permittee shall submit a summary report of the monitoring and recordkeeping activities, including the information required pursuant to §§60.49b(h) and (i), postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. In All instances of deviations from the requirements of this permit must be clearly identified.

3. 15A NCAC 02D .0501(c): COMPLIANCE WITH NATIONAL AMBIENT AIR QUALITY STANDARDS

- a. Particulate matter (PM₁₀) emissions from these sources (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 5.94 pounds per hour per boiler (3-hour average) during all periods of operation (normal, start-up, shutdown, and malfunction).
- b. Sulfur dioxide emissions from these sources (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 332.2 pounds per hour per boiler (24-hour block average) during all periods of operation (normal, start-up, shutdown, and malfunction).
- c. Nitrogen oxide emissions from these sources (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 121.0 pounds per hour per boiler (30-day rolling average) during all periods of operation (normal, start-up, shutdown, and malfunction).
- d. Carbon monoxide emissions from these sources (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 121.0 pounds per hour per boiler (30-day rolling average) during all periods of operation (normal, start-up, shutdown, and malfunction).
- e. The maximum sulfur content of any coal received and burned in these sources (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 1.0 percent by weight (total shipment average).

[15A NCAC 02D .0501(c)]

Testing [15A NCAC 02Q .0508(f)]

f. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above any limit given in Section 2.1.A.3.a through d above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c).

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

g. Particulate matter emissions from each source (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall be controlled by a bagfilter (**ID Nos. CD-1-1A, CD-1-1B, and CD-1-1C**). To ensure compliance, the Permittee shall

perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement must include an annual internal inspection of the bagfilters for structural and fabric filter integrity. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c) if the bagfilters are not inspected and maintained.

- h. The Permittee shall install, operate, and maintain a pressure drop indicator on each bagfilter (ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C). The pressure drop across each bagfilter (ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C) shall not exceed 10 inches of water. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c) if the pressure drop is not maintained within the prescribed limits.
- i. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) onsite and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the pressure drop once weekly at a minimum when the boiler is operating;
 - iii. the results of each inspection;
 - iv. a report of any maintenance performed on the bagfilters; and
 - v. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c) if these records are not maintained.

- j. For SO₂, the Permittee shall comply with the monitoring and recordkeeping requirements in Section 2.1.A.3.cc. below. No monitoring for sulfur content in coal shall be required. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c) if any 24-hour block average of SO₂ exceeds limit in Section 2.1.A.3.b. above, or the monitoring and recordkeeping requirements in Section 2.1.A.3.cc. below are not complied with
- k. The Permittee shall ensure compliance with 15A NCAC 02D .0501(c) by determining nitrogen oxide (NOx) emissions in pounds per million Btu (and pound per hour) using a continuous emissions monitoring (CEM) system meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75). The missing data procedure in Part 75 shall be used whenever the boiler combusts any fuel. Compliance with the emission standard shall be determined based on a 30-day rolling average. To compute the 30-day rolling average, the average hourly values (missing data shall be filled in accordance with 40 CFR Part 75) shall be summed, and the sum shall be divided by 720. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c), if any 30-day rolling average exceeds the limit per Section 2.1.A.3.c. above, or this monitoring and recordkeeping is not performed.
- 1. For CO, the Permittee shall follow the monitoring and recordkeeping requirements in Sections 2.1.A.4.i-j below and determine emissions in pounds per hour. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c) if this monitoring and recordkeeping is not performed, or any 30-day rolling average CO emissions exceed the emission limit in Section 2.1 A.3. d. above.

Reporting [15A NCAC 02Q .0508(f)]

- m. Within 30 days of a written request from DAQ, the Permittee shall submit a report of any maintenance performed on the bagfilters (**ID Nos. CD-1-1A, CD-1-1B, and CD-1-1C**).
- n. For PM₁₀, the Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
- o. Reporting requirements in Section 2.1.A.3.dd. and ee. below shall be sufficient to ensure compliance with SO₂ emission limit in Section 2.1.A.3.b. above.
- p. Reporting requirements in Section 2.1.A.4.o. below shall be sufficient to ensure compliance with CO emission limit in Section 2.1.A.3.d. above.
- q. The Permittee shall submit the nitrogen oxide continuous emissions monitoring data showing the 30-day rolling values in pound per million Btu (and pounds per hour) for each 30-day averaging period during the reporting period postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
- r. CEMs Monitor Availability The Permittee shall submit nitrogen oxide CEM systems monitor downtime

reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

Alternative Operating Scenario for Emissions of Sulfur Dioxide Only - While burning greater than 1.0 percent by weight sulfur coal (total shipment average)

aa. Sulfur dioxide emissions from each boiler (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 332.5 pounds per hour per boiler. [15A NCAC 02D .0501(c)]

Testing [15A NCAC 02Q .0508(f)]

bb. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above any limit given in Section 2.1.A. 3. aa. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c).

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

cc. The Permittee shall ensure compliance with 2.1 A. 3.aa. above by determining sulfur dioxide emissions in pounds per hour using a continuous emissions monitoring (CEM) system meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75, except that the lookback periods per 40 CFR 75.33 (Tables 1 and 2) shall consist of the available data up to the appropriate quality-assured hours. Also, the replacement procedures for monitor data availability between 80 and 90 percent may be used at values below 80 percent). The missing data procedure in Part 75 shall be used whenever the boiler combusts any fuel. Compliance with sulfur dioxide emission standards shall be determined by averaging hourly continuous emission monitoring system values over a 24hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values (missing data shall be filled in accordance with 40 CFR Part 75, except that the lookback periods per 40 CFR 75.33 (Tables 1 and 2) shall consist of the available data up to the appropriate quality-assured hours. Also, the replacement procedures for monitor data availability between 80 and 90 percent may be used at values below 80 percent) shall be summed, and the sum shall be divided by 24. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0501(c), if any 24-hour block average exceeds the limits per Section 2.1.A.3. aa. above or the records are not maintained.

Reporting [15A NCAC 02Q .0508 (f)]

- dd. The Permittee shall submit the continuous emissions monitoring data showing the 24-hour daily block values in pounds per hour for sulfur dioxide emissions for each 24-hour daily block averaging period during the reporting period no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.
- ee. CEMs Monitor Availability The Permittee shall submit sulfur dioxide CEM system monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

4. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

1987 Project - Best Available Control Technology

a. Particulate matter (PM₁₀) emissions from each source (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 0.027 pounds per million Btu heat input (three-hour average using stack test) during all periods of operation (normal, start-up, shutdown, and malfunction).

- b. Sulfur dioxide emissions from each source (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 1.51 pounds per million Btu heat input (24-hour block average using CEMS) during all periods of operation (normal, start-up, shutdown, and malfunction).
- c. Nitrogen oxide emissions from each source (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 0.55 pounds per million Btu heat input (30-day rolling average using CEMS) during all periods of operation (normal, start-up, shutdown, and malfunction).
- d. Carbon monoxide emissions from each source (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 0.55 pounds per million Btu heat input (30-day rolling average using CEMS) during all periods of operation (normal, start-up, shutdown, and malfunction).
- e. Sulfuric acid mist emissions from each source (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 0.021 pounds per million Btu heat input (three-hour average using stack test) during all periods of operation (normal, start-up, shutdown, and malfunction).
- f. The maximum sulfur content of any coal received and burned in these sources (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 1.0 percent by weight (total shipment average).

[15A NCAC 02D .0530]

2009 Project - Best Available Control Technology

g. Carbon monoxide emissions from each source (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**), when burning a mixture of coal/TDF/wood shall not exceed 0.55 pounds per million Btu heat input (30-day rolling average using CEMS), during all periods of operation (normal, start-up, shutdown, and malfunction).

[15A NCAC 02D .0530]

Testing [15A NCAC 02Q .0508(f)]

h. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above any limit given in Section 2.1 A.4.a.-e. and g. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

i. For particulate matter (PM₁₀), SO₂, and NOx, the Permittee shall follow the monitoring and recordkeeping requirements in Section 2.1.A.3.g. through i. above, Section 2.1 A.4.cc. below, and Section 2.1.A.3.k. above, respectively.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the requirements for PM_{10} in Section 2.1.A.3.g. through i. are not complied with.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if any 24-hour block average of SO₂ exceeds limit in Section 2.1.A.4.b. above, or this monitoring and recordkeeping is not performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530, if any 30-day rolling average exceeds the NOx limit in Section 2.1.A.4.c. above, or this monitoring and recordkeeping is not performed.

- j. The Permittee shall determine and monitor emission rate of CO in the unit of pounds per million Btu heat input, using the CEMS in §63.7525(a) (Section 2.1.A.8.p. below). If any 30-day rolling average emission rate exceeds the emission limit of CO in Section 2.1.A.4.d. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.
- k. The Permittee shall maintain records of actual emission rate of CO in the unit of pounds per million Btu heat input. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not maintained.
- 1. No monitoring or recordkeeping shall be required for sulfur content of coal and sulfuric acid mist emissions.

Reporting [15A NCAC 02Q .0508(f)]

m. Reporting requirements in Section 2.1.A.3.m. and n. above shall be sufficient to ensure compliance with PM₁₀ emission limit in Section 2.1.A.4.a. above.

- n. Reporting requirements in Section 2.1.A.4.dd. and ee. below shall be sufficient to ensure compliance with SO₂ emission limit in Section 2.1.A.4.b. above.
- o. For CO, the Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.
- p. Reporting requirements in Section 2.1.A.3.q. and r. above shall be sufficient to ensure compliance with NOx emission limit in Section 2.1.A.4.c. above.

Alternative Operating Scenario for Emissions of Sulfur Dioxide Only - While burning greater than 1.0 percent by weight sulfur coal (total shipment average)

aa. Sulfur dioxide emissions from each boiler (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**) shall not exceed 1.51 pounds per million Btu heat input. [15A NCAC 02D .0530]

Testing [15A NCAC 02Q .0508(f)]

bb. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ found in Section 3. If the results of this test are above any limit given in Section 2.1 A. 4. aa. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Monitoring/Recordkeeping [15A NCAC 02Q .0508 (f)]

cc. The Permittee shall ensure compliance with 2.1 A.4.aa. above by determining sulfur dioxide emissions in pounds per million Btu using a continuous emissions monitoring (CEM) system meeting the requirements of 40 CFR Part 75 except that unbiased values may be used (missing data shall be filled in accordance with 40 CFR Part 75, except that the lookback periods per 40 CFR 75.33 (Tables 1 and 2) shall consist of the available data up to the appropriate quality-assured hours. Also, the replacement procedures for monitor data availability between 80 and 90 percent may be used at values below 80 percent). The missing data procedure in Part 75 shall be used whenever the boiler combusts any fuel. Compliance with sulfur dioxide emission standards shall be determined by averaging hourly continuous emission monitoring system values over a 24hour block period beginning at midnight. To compute the 24-hour block average, the average hourly values (missing data shall be filled in accordance with 40 CFR Part 75, except that the lookback periods per 40 CFR 75.33 (Tables 1 and 2) shall consist of the available data up to the appropriate quality-assured hours. Also, the replacement procedures for monitor data availability between 80 and 90 percent may be used at values below 80 percent) shall be summed, and the sum shall be divided by 24. The minimum number of data points, equally spaced, required to determine a valid hour value shall be determined by 40 CFR Part 75. If any 24-hour block average exceeds the limits per Section 2.1 A.4. aa. above or the records are not maintained, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530.

Reporting [15A NCAC 02Q .0508 (f)]

- dd. The Permittee shall submit the continuous emissions monitoring data showing the 24-hour daily block values in pounds per hour for sulfur dioxide emissions for each 24-hour daily block averaging period during the reporting period no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September. All instances of deviations from the requirements of this permit must be clearly identified.
- ee. CEMs Monitor Availability The Permittee shall submit sulfur dioxide CEM system monitor downtime reports, including monitor availability values (as calculated for 40 CFR Part 75) for the last hour of the reporting period, no later than January 30 of each calendar year for the preceding three-month period between October and December, April 30 of each calendar year for the preceding three-month period between January and March, July 30 of each calendar year for the preceding three-month period between April and June, and October 30 of each calendar year for the preceding three-month period between July and September.

5. 15A NCAC 02D .0614: COMPLIANCE ASSURANCE MONITORING

- a. Per 40 CFR 64 and 15A NCAC 02D .0614, the Permittee shall comply with the following.
- b. Background

- i. Emission Unit(s).
 - (A) Description: Three watertube design coal/natural gas/No. 2 and No. 4 fuel oil/tire derived fuel/unadulterated wood/adulterated engineered wood/pelletized paper fuel/flyash briquette/creosote treated wood-fired boilers
 - (B) Identification. ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C
- ii. Applicable Regulation, Emission Limit, and Monitoring Requirements.
 - (A) Regulations: 15A NCAC 02D .0524 (Subpart Db) 15A NCAC 02D .0501(c) 15A NCAC 02D .0530
 - (B) Emission limits:
 - 1. 0.05 pounds per million Btu heat input (40 CFR 60.43b(a)(1)) [particulate matter]
 - 2. 5.94 pounds per hour per boiler [PM₁₀]
 - 3. 0.027 pounds per million Btu heat input per boiler [PM₁₀]
 - (C) Control Technology: Three bagfilters (ID Nos. CD-1-1A, CD-1-1B, and CD-1-1C)
- c. **Monitoring Approach**. The key elements of the monitoring approach for particulate matter, including parameters to be monitored, parameter ranges and performance criteria are presented in the following table.

	1	2
I. Indicator	Visible emissions	Pressure drop
Measurement Approach	Visible emissions from the fabric filter will be monitored continuously using COM system on each common stack	Pressure drop across the fabric filter is measured with a differential pressure gauge
II. Indicator Range	An excursion is defined as visible emissions in amounts greater than or equal to 15% (six-minute average) excluding data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities. Excursions trigger an inspection, corrective action, and a reporting requirement.	An excursion is defined as a pressure drop greater than 9.5 inches of water. Excursions trigger an inspection, corrective action, and a reporting requirement.
QIP Threshold	The QIP threshold is six excursions in a 6-month reporting period.	None selected

	1	2
III. Performance Criteria		
A. Data Representativeness	Measurements are being made at the emission point (fabric filter outlet) of each common stack	Pressure taps are located at the fabric filter inlet and outlet. The gauge has a minimum accuracy of 0.5 inches of water.
B. Verification of Operational Status	NA	NA
C. QA/QC Practices	The COM systems shall be calibrated, maintained and operated according to 40 CFR 60, Appendix F, Procedure 3.	The pressure gauge is checked daily for operation.
D. Monitoring Frequency	Data is collected continuously with COM systems.	Pressure drop is monitored daily.
E. Data Collection Procedures	Data from the COM systems is collected electronically and maintained on the Data Acquisition and Handling System computer along with information on the operating status of the boilers.	Pressure gauge readings are manually recorded daily.
F. Averaging Periods	NA	NA

d. Justification

- i. <u>Background</u>. The pollutant-specific emission units are the three identical stoker boilers used to produce steam. The particulate matter emissions from each boiler are controlled by fabric filters with approximately 16,800 square feet of filter area, each.
- ii. Rationale for Selection of Performance Indicators. Visible emissions was selected as the performance indicator because it is a good indicator of the proper operation and maintenance of the filter units. When the filter units are operating properly, there will not be any visible emissions in the exhaust outlet. Any increase in visible emissions indicates reduced performance of the filter units, therefore, the presence of visible emissions in levels exceeding or equal to 15% (six-minute average) is used as a performance indicator, excluding data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities,.

In general, filters are designed to operate at a relatively constant pressure drop. Monitoring pressure drop provides a means of detecting a change in operation that could lead to an increase in emissions. An increase in pressure drop can indicate that the cleaning cycle is not frequent enough, cleaning equipment is damaged/broken, the bags are becoming blinded, or the airflow has increased. A decrease in pressure drop may indicate broken or loose bags, but this is also indicated by the presence of visible emissions, indicator No. 1. A pressure drop across the filter unit also serves to indicate that there is airflow through the control device.

iii. <u>Rationale for Section of Indicator Ranges</u>. Per operating knowledge of the systems, the facility has selected an indicator range of greater than or equal to 15% opacity (six-minute average), excluding data recorded during monitoring malfunctions, associated repairs, and required quality assurance or control activities. When an excursion occurs, corrective action will be initiated, beginning with an evaluation of the occurrence to determine the action required to correct the situation. All excursions will be documented and reported. This indicator range was selected because: (1) an increase in visible emissions is indicative of an increase in particulate emissions; and (2) a COMs is a well-established monitoring technique for these sources.

The selected QIP threshold for fabric filter visible emissions is six excursions in a 6-month reporting period. This level is 3 percent of the total visible emissions observations. If the QIP threshold is exceeded in a semiannual reporting period, a QIP will be developed and implemented.

The indicator range chosen for the fabric filter pressure drop is greater than 9.5 inches of water. An excursion triggers an inspection, corrective action, and a reporting requirement. The pressure drop is recorded daily. As the pressure drop approaches 9.5 inches water the bags are scheduled for replacement.

If the monitoring and recordkeeping in Section 2.1.A.5.c. and d. above is not performed, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0614.

Reporting [15A NCAC 02Q .0508(f) and 40 CFR 64.9]

- e. The Permittee shall submit a summary report of all monitoring activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. The report shall also include the following information, as applicable:
 - i. Summary information on the number, duration and cause (including unknown cause, if applicable) of excursions or exceedances, as applicable, and the corrective actions taken;
 - ii. Summary information on the number, duration and cause (including unknown cause, if applicable) for monitor downtime incidents (other than downtime associated with zero and span or other daily calibration checks, if applicable); and
 - iii. A description of the actions taken to implement a QIP during the reporting period as specified in 40 CFR 64.8. Upon completion of a QIP, the owner or operator shall include in the next summary report documentation that the implementation of the plan has been completed and reduced the likelihood of similar levels of excursions or exceedances occurring.

All instances of deviations for the requirements of this permit must be clearly identified.

State-enforceable only

6. Best Available Control Technology (BACT):

General Assembly of North Carolina, Session Law 2007-397, Senate Bill 3 (SB3) - Under the provisions of a Renewable Energy and Energy Efficiency Portfolio Standard (REPS), the Permittee will be categorized as a new renewable energy facility that delivers electric power to an electric power supplier. SB3, pursuant to North Carolina General Statute (NCGS) 62-133.8(g) requires biomass combustion processes at a new renewable energy facility to meet Best Available Control Technology (BACT).

- A. In order to comply with the BACT determination pursuant to NCGS 62.133.8(g) for each pollutant, the following shall apply:
 - 1. PM₁₀ emissions shall not exceed 0.027 pounds per million Btu heat input per boiler⁴. (*Stack test: 3-run average for both filterable and condensable*)
 - 2. Nitrogen oxide emissions shall not exceed 0.55 pounds per million Btu heat input per boiler⁶. (*CEMS: 30-day rolling average*)
 - 3. Carbon monoxide emissions shall not exceed 0.55 pounds per million Btu heat input per boiler⁶. (CEMS: 30-day rolling average)
 - 5. Sulfuric acid mist emissions shall not exceed 0.021 pounds per million Btu heat input per boiler⁶.
 - 6. Sulfur dioxide emissions shall not exceed 1.51 pounds per million Btu heat input per boiler⁶ when burning tire derived fuel (TDF). (CEMS: 30-day rolling average)
 - 7. Inherently low sulfur biomass/wood shall be burned in the boilers.
 - 8. Volatile organic compounds emissions from the biomass-fired boilers shall be minimized by utilizing Good Combustion Practices.
 - 9. Mercury emissions shall not exceed 5.00 E-6 pounds per million Btu heat input per boiler⁶. (Stack test: 3-run average)

Testing [15A NCAC 02Q .0508(f)]

B. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ.

⁴ Stack measured or calculated emissions represent the collective emissions for the three boilers (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C,**) in the power unit. "Per boiler" emissions are derived by dividing the measured emissions by the boilers in operation during the timeframe specified. Compliance certification on a per boiler basis is based on the common stack emissions performance divided by the boilers in operation at the time of measurement per power unit.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- C. The Permittee shall follow the monitoring and recordkeeping requirements below:
 - 1. Section A.3.g. and i. for complying with the PM₁₀ SB3 BACT limit.
 - 2. Section 2.1 A.2. g., k., and o. for complying with the nitrogen oxide SB3 BACT limit.
 - 3. Section 2.1 A.8. p., q., v., and w. for complying with the carbon monoxide SB3 BACT limit.
 - 4. Section 2.1 A.4.cc. for complying with the sulfur dioxide SB3 BACT limit when burning TDF.
 - 5. Monthly recordkeeping of the amounts of each fuel fired in the boilers.

Reporting [15A NCAC 02Q .0508(f)]

D. The Permittee shall submit a summary report of monitoring and recordkeeping activities detailed in Sections 2.1 A.2.p., 2.1 A.3.n. and q., 2.1 A.3.dd-ee., and 2.1.A.4.o. above, and Sections 2.1 A.8.x. y., and z. below, and postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.

Federal-enforceable only

7. Cross-State Air Pollution Rule (CSAPR) Requirements

For fossil-fuel fired boilers (**ID Nos. ES-1-1A, ES-1-1B, and ES-1-1C**), the Permittee shall comply with all applicable requirements in 40 CFR Part 97, Subpart AAAAA "TR NOx Annual Trading Program", Subpart BBBBB "TR NOx Ozone Season Trading Program", and Subpart CCCCC "TR SO₂ Group 1 Trading Program".

8. 15A NCAC 02D .1111: MAXIMUM ACHIEVABLE CONTROL TECHNOLOGY

Applicability [40 CFR 63.7485, §63.7490(d), §63.7499(i), (p)]

- a. For the existing sources(s) in the subcategories of "stokers/sloped grate/other units designed to burn wet biomass/biomass-based solid" and "units designed to burn solid fuel", the Permittee shall comply with all applicable provisions, including the monitoring, recordkeeping, and reporting contained in Environmental Management Commission Standard 15A NCAC 02D .1111 "Maximum Achievable Control Technology" (MACT) as promulgated in 40 CFR 63, Subpart DDDDD "National Emission Standards for Hazardous Air Pollutants for Major Sources: Industrial, Commercial, and Institutional Boilers and Process Heaters" (Subpart 5D) and Subpart A "General Provisions."
 - The Permittee shall be subject to the requirements of 40 CFR 63, Subpart DDDDD, starting May 20, 2019. Note that the requirements of this standard may require action on behalf of the Permittee prior to May 20, 2019.

Definitions and Nomenclature [§63.7575]

b. For the purpose of this permit condition, the definitions and nomenclature contained in 40 CFR 63.7575 shall apply.

40 CFR Part 63 Subpart A General Provisions [§63.7565]

c. The Permittee shall comply with the requirements of 40 CFR 63 Subpart A General Provisions according to the applicability of Subpart A to such sources as identified in Table 10 to Subpart 5D.

Compliance Date [§63. 7510(e), §63.56(b)]

- d. The Permittee shall:
 - i. Complete the initial tune up and the one-time energy assessment (i.e., Sections 2.1 A.8. r. and u. below) no later than May 20, 2019.
 - ii. Complete the initial compliance requirements in Section 2.1 A.8.m. below no later than November 16, 2019 and according to the applicable provisions in §63.7(a)(2).

General Compliance Requirements [§63.7505(a), §63.7500]

e. At all times the affected unit(s) is operating, the Permittee shall be in compliance with the emission standards in Section 2.1 A.10.g. below, except during periods of startup and shutdown. During startup and shutdown,

the Permittee shall comply only with items 5 and 6 of Table 3 of Subpart 5D.

f. At all times, then Permittee shall operate and maintain any affected source (as defined in §63.7490), including associated air pollution control equipment and monitoring equipment, in a manner consistent with safety and good air pollution control practices for minimizing emissions. Determination of whether such operation and maintenance procedures are being used will be based on information available to the Administrator that may include, but is not limited to, monitoring results, review of operation and maintenance procedures, review of operation and maintenance records, and inspection of the source.

Emission Limits [15A NCAC 02Q .0508(f), §63.7500(a)(1), and Table 2 to the Subpart]

g. The affected units shall meet the following emission limits:

Pollutant	Emission Limit
Hydrochloric Acid (HCl)	2.2E-02 lb per MMBtu of heat input
Mercury (Hg)	5.7E-06 lb per MMBtu of heat input
Carbon Monoxide (CO)	1,500 ppm by volume on a dry basis corrected to 3 percent oxygen, 3-run average; or (720 ppm by volume on a dry basis corrected to 3 percent oxygen, 30-day rolling average)
Filterable Particulate Matter(PM) or Total Suspended Metals (TSM)	3.7E-02 lb per MMBtu of heat input; or (2.4E-04 lb per MMBtu of heat input)

Operating Limits [15A NCAC 02Q .0508(f), §63.7500(a)(2), and Table 4 to the Subpart]

h. The Permittee shall comply with the following operation limits:

Maintain opacity to less than or equal to 10 percent opacity or the highest hourly average opacity reading measured during the performance test run demonstrating compliance with the PM (or TSM) emission limitation (daily block average);

or

Install and operate a bag leak detection system according to §63.7525 and operate the fabric filter such that the bag leak detection system alert is not activated more than 5 percent of the operating time during each 6-month period.

i. For boilers and process heaters that demonstrate compliance with a performance test, the Permittee shall maintain the 30-day rolling average operating load of each unit such that it does not exceed 110 percent of the highest hourly average operating load recorded during the performance test.

Testing [15A NCAC 2Q .0508(f)]

j. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test(s) are above the limit given in Section 2.1 A.8.g. above, the Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111.

Notifications [15A NCAC 02Q .0508(f), §§63.7545, 63.7530]

- k. The Permittee shall submit a Notification of Intent to conduct a performance test at least 60 days before the performance test is scheduled to begin.
- 1. For the initial compliance demonstration for each affected source, the Permittee shall submit the Notification of Compliance Status, including all performance test results and fuel analyses, before the close of business on the 60th day following the completion of all performance test and/or other initial compliance demonstrations for all affected sources at the facility. The Notification of Compliance Status report must contain all the information specified in paragraphs (e)(1) through (8) of §63.7545 as applicable. [§§63.9(h)(2)(ii), 63.10(d)(2), 63.7545(e)]

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the requirements in Sections 2.1 A.8. k. and l. above are not met.

<u>Initial compliance requirements</u> [15A NCAC 02Q .0508(f), §63.7510]

m. The Permittee shall demonstrate compliance with the limits in Section 2.1 A.9.g. above by conducting initial performance test(s) and fuel analyses, establishing operating limits and conducting continuous monitoring system (CMS) evaluation(s) as necessary according to §§63.7510, 63.7525 and 63.7530.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the requirements in this Section 2.1 A.8. m. are not met.

Subsequent compliance requirements [15A NCAC 02Q .0508(f), §63.7515]

- n. The Permittee shall conduct subsequent performance tests and fuel analyses as necessary according to \$63,7515.
- o. The Permittee shall demonstrate continuous compliance with each emission limit and operating limit that applies according to §63.7540.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the requirements in Sections 2.1 A.8.n. and o. above are not met.

Monitoring requirements [15A NCAC 2Q .0508(f), §63.7525]

- p. The Permittee shall install, operate, and maintain an oxygen analyzer system, as defined in §63.7575, or install, certify, operate and maintain continuous emission monitoring systems for CO and oxygen (or carbon dioxide) according to the procedures §63.7525(a).
- q. The Permittee shall meet the requirements for all monitoring systems as applicable according to §63.7525.

The Permittee shall be deemed in noncompliance with 15A NCAC 2D .1111 if the requirements in Sections 2.1 A.8.p. and q. above are not met.

Work Practice Standards [15A NCAC 02Q .0508(f)]

- r. The Permittee shall conduct a tune-up of the source(s) every year as specified below. The Permittee shall conduct the tune-up while burning the type of fuel (or fuels in case of units that routinely burn a mixture) that provided the majority of the heat input to the boiler or process heater over the 12 months prior to the tune-up.
 - i. As applicable, inspect the burner, and clean or replace any components of the burner as necessary (the Permittee may perform the burner inspection any time prior to the tune-up or delay the burner inspection until the next scheduled unit shutdown;
 - ii. Inspect the flame pattern, as applicable, and adjust the burner as necessary to optimize the flame pattern. The adjustment should be consistent with the manufacturer's specifications, if available;
 - iii. Inspect the system controlling the air-to-fuel ratio, as applicable, and ensure that it is correctly calibrated and functioning properly (you may delay the inspection until the next scheduled unit shutdown);
 - iv. Optimize total emissions of carbon monoxide. This optimization should be consistent with the manufacturer's specifications, if available, and with any NO_X requirement to which the unit is subject; and
 - v. Measure the concentrations in the effluent stream of carbon monoxide in parts per million, by volume, and oxygen in volume percent, before and after the adjustments are made (measurements may be either on a dry or wet basis, as long as it is the same basis before and after the adjustments are made). Measurements may be taken using a portable CO analyzer.

[§§63.7500(a), §63.7540(a)(10)]

- s. Each tune-up shall be conducted no more than 13 months after the previous tune-up. [40CFR 63.7515(d)]
- t. If the unit is not operating on the required date for a tune-up, the tune-up must be conducted within 30 calendar days of startup. [§63.7540(a)(13), §63.7515(g)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Sections 2.1 A.8.r. through t. above are not met.

Energy Assessment Requirements [15A NCAC 02Q .0508(f)]

u. The Permittee shall have a one-time energy assessment performed by a qualified energy assessor. The energy assessment must address the requirements in Subpart 5D, Table 3, with the extent of the evaluation for items

(a) to (e) in Table 3 appropriate for the on-site technical hours listed in §63.7575: An energy assessment completed on or after January 1, 2008, that meets or is amended to meet the energy assessment requirements in this table, satisfies the energy assessment requirement. [§63.7500(a)(1), Table 3]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Section 2.1 A.8.u. are not met.

Recordkeeping Requirements [15A NCAC 02Q .0508(f), §63.7555]

- v. The Permittee shall:
 - i. Keep a copy of each notification and report submitted to comply with Subpart 5D, including all documentation supporting any Initial Notification or Notification of Compliance Status, or semiannual compliance report that has been submitted. [§§63.7555(a)(1), 63.10(b)(2)(xiv)]
 - ii. Keep records of performance tests, fuel analyses, or other compliance demonstrations and performance evaluations. [§63.10(b)(2)(viii)]
 - iii. Maintain on-site and submit, if requested by the Administrator, an annual report containing the information in paragraphs (A) through (C) below:
 - A. The concentrations of carbon monoxide in the effluent stream in parts per million by volume, and oxygen in volume percent, measured at high fire or typical operating load, before and after the tune-up of the boiler or process heater;
 - B. A description of any corrective actions taken as a part of the tune-up; and
 - C. the type and amount of fuel used over the 12 months prior to the annual adjustment, but only if the unit was physically and legally capable of using more than one type of fuel during that period. Units sharing a fuel meter may estimate the fuel use by each unit.

[§63.7540(a)(10)(vi)]

- iv. For each CEMS, COMS, and continuous monitoring system, keep records according to paragraphs (b)(1) through (5) of §63.7555.
- v. Keep records required in Table 8 of Subpart 5D including records of all monitoring data and calculated averages for applicable operating limits, such as opacity, pressure drop, pH, and operating load, to show continuous compliance with each emission limit and operating limit that applies.
- vi. Keep the applicable records in paragraphs (d)(1) through (13) of §63.7555.

w. The Permittee shall:

- i. Maintain records in a form suitable and readily available for expeditious review;
- ii. Keep each record for 5 years following the date of each occurrence, measurement, maintenance, corrective action, report, or record; and
- iii. Keep each record on site for at least 2 years after the date of each occurrence, measurement, maintenance, corrective action, report, or record. The Permittee can keep the records offsite for the remaining 3 years. [§63.7560, §63.10(b)(1)]

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .1111 if the requirements in Sections 2.1 A.8.v. and w. above are not met.

Reporting Requirements [15A NCAC 02Q .0508(f), §63.7550]

- x. The Permittee shall submit a compliance report to the DAQ on a semi-annual basis, postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June.
 - i. The first compliance report shall be postmarked on or before July 30, 2019 and cover the period from May 20, 2019 through June 30, 2019.
 - ii. The compliance reports shall also be submitted electronically to the EPA via the procedures in §63.7550(h).
- y. The compliance report shall contain:
 - i. The information in §63.7550(c) as applicable.
 - ii. For each deviation from an emission limit or operating limit, the report shall contain the information in §63.7550(d) and (e) as applicable.

- z. Within 60 days after the date of completing each performance test (defined in §63.2) including any associated fuel analyses and/or CEMS performance evaluation (defined in §63.2) as required by Subpart 5D, the Permittee shall submit the results to the DAQ pursuant to 63.10(d)(2) and to the EPA via the procedures in §63.7550(h).
- B. Three coal bunkers (ID Nos. ES-2A through ES-2C) and associated bagfilters (ID Nos. CD-2A through ES-2C)

One flyash silo (ID No. ES-3) with wet slurry pugmill for unloading or dry unloading system and associated binvent (ID No. CD-3)

One bottom ash silo (ID No. ES-4) with wet slurry pugmill for unloading and associated binvent (ID No. CD-4)

Two ash system vacuum transport pumps (ID Nos. ES-5A and ES-5B) and associated filters (ID Nos. CD-5A and CD-5B), cyclones (ID Nos. CD-5D and CD-5E), and bagfilter (ID No. CD-5C)

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Particulate matter	Coal bunkers (ID Nos. ES-2A through ES-2C) – 2.7x10 ⁻⁵ pounds per hour – each coal bunker	15A NCAC 02D .0530
	Ash silos (ID Nos. ES-3 and ES-4) – 0.032 pounds per hour – each ash silo	
	Ash transport (ID Nos. ES-5A and ES-5B) – 0.032 pounds per hour – each ash silo pump	

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from these sources (**ID Nos. ES-2A through ES-2C, ES-3, ES-4, ES-5A, and ES-5B**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 B.1.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a week the Permittee shall observe the emission points from these sources (ID Nos. ES-2A through ES-2C, ES-3, ES-4, ES-5A, and ES-5B) for any visible emissions above normal. If visible emissions from these sources (ID Nos. ES-2A through ES-2C, ES-3, ES-4, ES-5A, and ES-5B) are observed to be above normal, the Permittee shall:
 - i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission sources (**ID Nos. ES-2A through ES-2C, ES-3, ES-4, ES-5A, and ES-5B**) in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 B.1.a. above.

If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on site and made available to an authorized DAQ representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

- a. Particulate matter emissions from each source (**ID Nos. ES-2A through ES-2C**) shall not exceed 2.7x10⁻⁵ pounds per hour. [15A NCAC 02D .0530]
- b. Particulate matter emissions from each source (**ID Nos. ES-3 and ES-4**) shall not exceed 0.032 pounds per hour. [15A NCAC 02D .0530]
- c. Particulate matter emissions from each source (**ID Nos. ES-5A and ES-5B**) shall not exceed 0.032 pounds per hour. [15A NCAC 02D .0530]

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- d. Particulate matter emissions from these sources (ID Nos. ES-2A through ES-2C, ES-3, ES-4, ES-5A, and ES-5B) shall be controlled by four bagfilters (ID Nos. CD-2A through CD-2C, and CD-5B), two simple cyclones (ID Nos. CD-5D and CD-5E), two binvents (ID Nos. CD-3 and CD-4), and two in-line filters (ID Nos. CD-5A and CD-5B) as described above. To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturers. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. an annual (for each 12 month period following the initial inspection) internal inspection of the simple cyclones structural integrity; and
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilters/binvents/in-line filters for structural and fabric filter integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the binvents, cyclones, inline filters, and bagfilters are not inspected and maintained.

- e. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) on site and made available to an authorized DAQ representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the control devices; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- f. Upon request from the DAQ, the Permittee shall submit, within 30 days of such request, a report of any maintenance performed on a control device.
- g. The Permittee shall submit a summary report of the monitoring and recordkeeping postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

C. Coal unloading/storage and transfer operations (ID No. ES-6) and associated wet suppression system (ID No. Wetsup)

The following table provides a summary of limits and/or standards for the emission source(s) described above.

Regulated Pollutant	Limits/Standards	Applicable Regulation
Visible emissions	20 percent opacity	15A NCAC 02D .0521
Particulate matter	Wet suppression shall be used on the following:	15A NCAC 02D .0530
	-rail car unloading -coal pile load-in/out -wind erosion coal piles	

1. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this source (**ID No. ES-6**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent opacity not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 C.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a week the Permittee shall observe this source (**ID No. ES-6**) for any visible emissions above normal. If visible emissions from this source (**ID No. ES-6**) are observed to be above normal, the Permittee shall:
 - i. take appropriate action to correct the above-normal emissions within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source (**ID No. ES-6**) in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 C.1.a above.

If the above-normal emissions are not corrected per i. above or if the demonstration in ii. above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on site and made available to an authorized DAQ representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. the results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0530: PREVENTION OF SIGNIFICANT DETERIORATION

a. The Permittee shall employ wet suppression as needed on the rail car unloading, the coal pile load-in/out, and

the wind erosion coal piles (ID No. ES-6). [15A NCAC 02D .0530]

Monitoring [15A NCAC 02Q .0508(f)]

b. Particulate matter emissions from this emission source (**ID Nos. ES-6**) shall be controlled by wet suppression (**ID No. Wetsup**) as needed. To ensure compliance, the Permittee shall perform inspections and maintenance on the wet suppression (**ID No. Wetsup**) system as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there are no manufacturer's inspection and maintenance requirement shall include a monthly external inspection of the system for integrity of piping and nozzles. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the system is not inspected and maintained.

Recordkeeping [15A NCAC 02Q .0508(f)]

- c. A wet suppression log shall be maintained indicating areas and dates wet suppression was applied. No reporting is required but the log shall be made available to a DAQ representative upon request. The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if the wet suppression log is not maintained.
- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) onsite and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each action or inspection;
 - iii. a report of any maintenance performed on the wet suppression system (ID No. Wetsup); and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0530 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. Within 30 days of a written request from the DAQ, the Permittee shall submit a report of any maintenance performed on the wet suppression system (**ID No. Wetsup**).
- f. The Permittee shall submit a written summary report of maintenance and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

D. One cooling tower (ID No. ES-7)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards		Applicable Regulation
particulate matter	$E = 4.10 \times P^{0.67}$ for P or $E = 55.0 \times P^{0.11} - 40$ for $P > 30$ where: E = allowable emission rate in pound P = process weight rate in tons per h	ls per hour	15A NCAC 02D .0515

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from this source (**ID No. ES-7**) shall not exceed an allowable emission rate as calculated by the following equation: [15A NCAC 02D .0515(a)]

$$E = 4.10 \text{ x P}^{0.67} \qquad \text{for } P \leq 30 \text{ tons per hour}$$
 or
$$E = 55.0 \text{ x P}^{0.11} - 40 \qquad \text{for } P > 30 \text{ tons per hour}$$

where E = allowable emission rate in pounds per hour

P = process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in 2.1 D.1.a above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping/Reporting [15A NCAC 02Q .0508(f)]

c. No monitoring/recordkeeping/reporting is required for particulate matter emissions from this source.

E. One alkaline sorbent (limestone/lime/trona) silo (ID No. ES-8) and associated vent fabric filter (ID No. CD-8)

The following table provides a summary of limits and standards for the emission source(s) described above:

Regulated Pollutant	Limits/Standards	Applicable Regulation
particulate matter	$E = 4.10 \text{ P}^{0.67}$ where: E = allowable particulate emission rate in pounds per hour P = process weight rate in tons per hour	15A NCAC 02D .0515
Visible emissions	20 percent opacity (except during startups, shutdowns, and malfunctions) when averaged over a six-minute period except that six-minute periods averaging not more than 87 percent opacity may occur not more than once in any hour nor more than four times in any 24-hour period.	15A NCAC 02D .0521

1. 15A NCAC 02D .0515: PARTICULATES FROM MISCELLANEOUS INDUSTRIAL PROCESSES

a. Emissions of particulate matter from this source (**ID No. ES-8**) shall not exceed an allowable emission rate as calculated by the following equations: [15A NCAC 02D .0515(a)]

$$E = 4.10 \text{ x P}^{0.67}$$
 Where $E =$ allowable emission rate in pounds per hour $P =$ process weight in tons per hour

Liquid and gaseous fuels and combustion air are not considered as part of the process weight.

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E. 1. a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515.

Monitoring/Recordkeeping [15A NCAC 02Q .0508(f)]

- c. Particulate matter emissions from the silo (**ID No. ES-8**) shall be controlled by the bagfilter (**ID No. CD-8**). To ensure compliance, the Permittee shall perform inspections and maintenance as recommended by the manufacturer. In addition to the manufacturer's inspection and maintenance recommendations, or if there is no manufacturer's inspection and maintenance recommendations, as a minimum, the inspection and maintenance requirement shall include the following:
 - i. a monthly visual inspection of the system ductwork and material collection unit for leaks; and
 - ii. an annual (for each 12 month period following the initial inspection) internal inspection of the bagfilter's structural integrity.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if the ductwork and bagfilter

are not inspected and maintained.

- d. The results of inspection and maintenance shall be maintained in a logbook (written or electronic format) onsite and made available to an authorized representative upon request. The logbook shall record the following:
 - i. the date and time of each recorded action;
 - ii. the results of each inspection;
 - iii. the results of any maintenance performed on the bagfilter; and
 - iv. any variance from manufacturer's recommendations, if any, and corrections made.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0515 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

- e. The Permittee shall submit the results of any maintenance performed on the bagfilter within 30 days of a written request by the DAQ.
- f. The Permittee shall submit a summary report of monitoring and recordkeeping activities postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

2. 15A NCAC 02D .0521: CONTROL OF VISIBLE EMISSIONS

a. Visible emissions from this source (**ID No. ES-8**) shall not be more than 20 percent opacity when averaged over a six-minute period. However, six-minute averaging periods may exceed 20 percent not more than once in any hour and not more than four times in any 24-hour period. In no event shall the six-minute average exceed 87 percent opacity. [15A NCAC 02D .0521(d)]

Testing [15A NCAC 02Q .0508(f)]

b. If emissions testing is required, the testing shall be performed in accordance with General Condition JJ. If the results of this test are above the limit given in Section 2.1 E.2.a. above, the Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521.

Monitoring [15A NCAC 02Q .0508(f)]

- c. To ensure compliance, once a month the Permittee shall observe the emission point of this source (**ID No. ES-8**) for any visible emissions above normal when the source is operating. If visible emissions from this source is observed to be above normal, the Permittee shall either:
 - i. take appropriate action to correct the above-normal emissions as soon as practicable and within the monitoring period and record the action taken as provided in the recordkeeping requirements below, or
 - ii. demonstrate that the percent opacity from the emission points of the emission source in accordance with 15A NCAC 02D .2601 (Method 9) for 12 minutes is below the limit given in Section 2.1 E.2.a. above.

If the above-normal emissions are not corrected per (i) above or if the demonstration in (ii) above cannot be made, the Permittee shall be deemed to be in noncompliance with 15A NCAC 02D .0521.

Recordkeeping [15A NCAC 02Q .0508(f)]

- d. The results of the monitoring shall be maintained in a logbook (written or electronic format) on-site and made available to an authorized representative upon request. The logbook shall record the following:
 - i. The date and time of each recorded action;
 - ii. The results of each observation and/or test noting those sources with emissions that were observed to be in noncompliance along with any corrective actions taken to reduce visible emissions; and
 - iii. The results of any corrective actions performed.

The Permittee shall be deemed in noncompliance with 15A NCAC 02D .0521 if these records are not maintained.

Reporting [15A NCAC 02Q .0508(f)]

e. The Permittee shall submit a summary report of the observations postmarked on or before January 30 of each calendar year for the preceding six-month period between July and December and July 30 of each calendar year for the preceding six-month period between January and June. All instances of deviations from the requirements of this permit must be clearly identified.

SECTION 3 - GENERAL CONDITIONS (version 5.3, 08/21/2018)

This section describes terms and conditions applicable to this Title V facility.

A. General Provisions [NCGS 143-215 and 15A NCAC 02Q .0508(i)(16)]

- 1. Terms not otherwise defined in this permit shall have the meaning assigned to such terms as defined in 15A NCAC 02D and 02Q.
- 2. The terms, conditions, requirements, limitations, and restrictions set forth in this permit are binding and enforceable pursuant to NCGS 143-215.114A and 143-215.114B, including assessment of civil and/or criminal penalties. Any unauthorized deviation from the conditions of this permit may constitute grounds for revocation and/or enforcement action by the DAQ.
- 3. This permit is not a waiver of or approval of any other Department permits that may be required for other aspects of the facility which are not addressed in this permit.
- 4. This permit does not relieve the Permittee from liability for harm or injury to human health or welfare, animal or plant life, or property caused by the construction or operation of this permitted facility, or from penalties therefore, nor does it allow the Permittee to cause pollution in contravention of state laws or rules, unless specifically authorized by an order from the North Carolina Environmental Management Commission.
- 5. Except as identified as state-only requirements in this permit, all terms and conditions contained herein shall be enforceable by the DAQ, the EPA, and citizens of the United States as defined in the Federal Clean Air Act.
- 6. Any stationary source of air pollution shall not be operated, maintained, or modified without the appropriate and valid permits issued by the DAQ, unless the source is exempted by rule. The DAQ may issue a permit only after it receives reasonable assurance that the installation will not cause air pollution in violation of any of the applicable requirements. A permitted installation may only be operated, maintained, constructed, expanded, or modified in a manner that is consistent with the terms of this permit.

B. **Permit Availability** [15A NCAC 02Q .0507(k) and .0508(i)(9)(B)]

The Permittee shall have available at the facility a copy of this permit and shall retain for the duration of the permit term one complete copy of the application and any information submitted in support of the application package. The permit and application shall be made available to an authorized representative of Department of Environmental Quality upon request.

C. Severability Clause [15A NCAC 02Q .0508(i)(2)]

In the event of an administrative challenge to a final and binding permit in which a condition is held to be invalid, the provisions in this permit are severable so that all requirements contained in the permit, except those held to be invalid, shall remain valid and must be complied with.

D. **Submissions** [15A NCAC 02Q .0507(e) and 02Q .0508(i)(16)]

Except as otherwise specified herein, two copies of all documents, reports, test data, monitoring data, notifications, request for renewal, and any other information required by this permit shall be submitted to the appropriate Regional Office. Refer to the Regional Office address on the cover page of this permit. For continuous emissions monitoring systems (CEMS) reports, continuous opacity monitoring systems (COMS) reports, quality assurance (QA)/quality control (QC) reports, acid rain CEM certification reports, and NOx budget CEM certification reports, one copy shall be sent to the appropriate Regional Office and one copy shall be sent to:

Supervisor, Stationary Source Compliance North Carolina Division of Air Quality 1641 Mail Service Center Raleigh, NC 27699-1641

All submittals shall include the facility name and Facility ID number (refer to the cover page of this permit).

E. **Duty to Comply** [15A NCAC 02Q .0508(i)(3)]

The Permittee shall comply with all terms, conditions, requirements, limitations and restrictions set forth in this permit. Noncompliance with any permit condition except conditions identified as state-only requirements constitutes a violation of the Federal Clean Air Act. Noncompliance with any permit condition is grounds for enforcement

action, for permit termination, revocation and reissuance, or modification, or for denial of a permit renewal application.

F. Circumvention - STATE ENFORCEABLE ONLY

The facility shall be properly operated and maintained at all times in a manner that will effect an overall reduction in air pollution. Unless otherwise specified by this permit, no emission source may be operated without the concurrent operation of its associated air pollution control device(s) and appurtenances.

G. Permit Modifications

- 1. Administrative Permit Amendments [15A NCAC 02Q .0514]
 - The Permittee shall submit an application for an administrative permit amendment in accordance with 15A NCAC 02Q .0514.
- Transfer in Ownership or Operation and Application Submittal Content [15A NCAC 02Q .0524 and 02Q .0505]
 The Permittee shall submit an application for an ownership change in accordance with 15A NCAC 02Q.0524 and 02Q .0505.
- 3. Minor Permit Modifications [15A NCAC 02Q .0515]
 - The Permittee shall submit an application for a minor permit modification in accordance with 15A NCAC 02Q .0515.
- 4. Significant Permit Modifications [15A NCAC 02Q .0516]
 - The Permittee shall submit an application for a significant permit modification in accordance with 15A NCAC 02O .0516.
- 5. Reopening for Cause [15A NCAC 02Q .0517]
 - The Permittee shall submit an application for reopening for cause in accordance with 15A NCAC 02Q .0517.

H. Changes Not Requiring Permit Modifications

1. Reporting Requirements

Any of the following that would result in new or increased emissions from the emission source(s) listed in Section 1 must be reported to the Regional Supervisor, DAQ:

- a. changes in the information submitted in the application;
- b. changes that modify equipment or processes; or
- c. changes in the quantity or quality of materials processed.

If appropriate, modifications to the permit may then be made by the DAQ to reflect any necessary changes in the permit conditions. In no case are any new or increased emissions allowed that will cause a violation of the emission limitations specified herein.

2. Section 502(b)(10) Changes [15A NCAC 02Q .0523(a)]

- a. "Section 502(b)(10) changes" means changes that contravene an express permit term or condition. Such changes do not include changes that would violate applicable requirements or contravene federally enforceable permit terms and conditions that are monitoring (including test methods), recordkeeping, reporting, or compliance certification requirements.
- b. The Permittee may make Section 502(b)(10) changes without having the permit revised if:
 - i. the changes are not a modification under Title I of the Federal Clean Air Act;
 - ii. the changes do not cause the allowable emissions under the permit to be exceeded;
 - iii. the Permittee notifies the Director and EPA with written notification at least seven days before the change is made; and
 - iv. the Permittee shall attach the notice to the relevant permit.
- c. The written notification shall include:
 - i. a description of the change;
 - ii. the date on which the change will occur;
 - iii. any change in emissions; and
 - iv. any permit term or condition that is no longer applicable as a result of the change.
- d. Section 502(b)(10) changes shall be made in the permit the next time that the permit is revised or renewed, whichever comes first.
- 3. Off Permit Changes [15A NCAC 02Q .0523(b)]

The Permittee may make changes in the operation or emissions without revising the permit if:

- a. the change affects only insignificant activities and the activities remain insignificant after the change; or
- b. the change is not covered under any applicable requirement.
- 4. Emissions Trading [15A NCAC 02Q .0523(c)]

To the extent that emissions trading is allowed under 15A NCAC 02D, including subsequently adopted maximum achievable control technology standards, emissions trading shall be allowed without permit revision pursuant to 15A NCAC 02Q .0523(c).

I.A <u>Reporting Requirements for Excess Emissions and Permit Deviations</u> [15A NCAC 02D .0535(f) and 02Q .0508(f)(2)]

<u>"Excess Emissions"</u> - means an emission rate that exceeds any applicable emission limitation or standard allowed by any rule in Sections .0500, .0900, .1200, or .1400 of Subchapter 02D; or by a permit condition; or that exceeds an emission limit established in a permit issued under 15A NCAC 02Q .0700. (*Note: Definitions of excess emissions under 02D .1110 and 02D .1111 shall apply where defined by rule.*)

<u>"Deviations"</u> - for the purposes of this condition, any action or condition not in accordance with the terms and conditions of this permit including those attributable to upset conditions as well as excess emissions as defined above lasting less than four hours.

Excess Emissions

- 1. If a source is required to report excess emissions under NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or the operating permit provides for periodic (e.g., quarterly) reporting of excess emissions, reporting shall be performed as prescribed therein.
- 2. If the source is not subject to NSPS (15A NCAC 02D .0524), NESHAPS (15A NCAC 02D .1110 or .1111), or these rules do NOT define "excess emissions," the Permittee shall report excess emissions in accordance with 15A NCAC 02D .0535 as follows:
 - a. Pursuant to 15A NCAC 02D .0535, if excess emissions last for more than four hours resulting from a malfunction, a breakdown of process or control equipment, or any other abnormal condition, the owner or operator shall:
 - i. notify the Regional Supervisor or Director of any such occurrence by 9:00 a.m. Eastern Time of the Division's next business day of becoming aware of the occurrence and provide:
 - name and location of the facility;
 - nature and cause of the malfunction or breakdown;
 - time when the malfunction or breakdown is first observed;
 - expected duration; and
 - estimated rate of emissions:
 - ii. notify the Regional Supervisor or Director immediately when corrective measures have been accomplished; and
 - iii. submit to the Regional Supervisor or Director within 15 days a written report as described in 15A NCAC 02D .0535(f)(3).

Permit Deviations

- 3. Pursuant to 15A NCAC 02Q .0508(f)(2), the Permittee shall report deviations from permit requirements (terms and conditions) as follows:
 - a. Notify the Regional Supervisor or Director of all other deviations from permit requirements not covered under 15A NCAC 02D .0535 quarterly. A written report to the Regional Supervisor shall include the probable cause of such deviation and any corrective actions or preventative actions taken. The responsible official shall certify all deviations from permit requirements.

I.B Other Requirements under 15A NCAC 02D .0535

The Permittee shall comply with all other applicable requirements contained in 15A NCAC 02D .0535, including 15A NCAC 02D .0535(c) as follows:

1. Any excess emissions that do not occur during start-up and shut-down shall be considered a violation of the appropriate rule unless the owner or operator of the sources demonstrates to the Director, that the excess emissions are a result of a malfunction. The Director shall consider, along with any other pertinent information, the criteria contained in 15A NCAC 02D .0535(c)(1) through (7).

2. 15A NCAC 02D .0535(g). Excess emissions during start-up and shut-down shall be considered a violation of the appropriate rule if the owner or operator cannot demonstrate that excess emissions are unavoidable.

J. Emergency Provisions [40 CFR 70.6(g)]

The Permittee shall be subject to the following provisions with respect to emergencies:

- An emergency means any situation arising from sudden and reasonably unforeseeable events beyond the control
 of the facility, including acts of God, which situation requires immediate corrective action to restore normal
 operation, and that causes the facility to exceed a technology-based emission limitation under the permit, due
 to unavoidable increases in emissions attributable to the emergency. An emergency shall not include
 noncompliance to the extent caused by improperly designed equipment, lack of preventive maintenance,
 careless or improper operation, or operator error.
- 2. An emergency constitutes an affirmative defense to an action brought for noncompliance with such technology-based emission limitations if the conditions specified in 3. below are met.
- 3. The affirmative defense of emergency shall be demonstrated through properly signed contemporaneous operating logs or other relevant evidence that include information as follows:
 - a. an emergency occurred and the Permittee can identify the cause(s) of the emergency;
 - b. the permitted facility was at the time being properly operated;
 - c. during the period of the emergency the Permittee took all reasonable steps to minimize levels of emissions that exceeded the standards or other requirements in the permit; and
 - d. the Permittee submitted notice of the emergency to the DAQ within two working days of the time when emission limitations were exceeded due to the emergency. This notice must contain a description of the emergency, steps taken to mitigate emissions, and corrective actions taken.
- 4. In any enforcement proceeding, the Permittee seeking to establish the occurrence of an emergency has the burden of proof.
- 5. This provision is in addition to any emergency or upset provision contained in any applicable requirement specified elsewhere herein.

K. **Permit Renewal** [15A NCAC 02Q .0508(e) and 02Q .0513(b)]

This 15A NCAC 02Q .0500 permit is issued for a fixed term not to exceed five years and shall expire at the end of its term. Permit expiration terminates the facility's right to operate unless a complete 15A NCAC 02Q .0500 renewal application is submitted at least six months before the date of permit expiration. If the Permittee or applicant has complied with 15A NCAC 02Q .0512(b)(1), this 15A NCAC 02Q .0500 permit shall not expire until the renewal permit has been issued or denied. Permit expiration under 15A NCAC 02Q .0400 terminates the facility's right to operate unless a complete 15A NCAC 02Q .0400 renewal application is submitted at least six months before the date of permit expiration for facilities subject to 15A NCAC 02Q .0400 requirements. In either of these events, all terms and conditions of these permits shall remain in effect until the renewal permits have been issued or denied.

L. Need to Halt or Reduce Activity Not a Defense [15A NCAC 02Q .0508(i)(4)]

It shall not be a defense for a Permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

M. <u>Duty to Provide Information (submittal of information)</u> [15A NCAC 02Q .0508(i)(9)]

- 1. The Permittee shall furnish to the DAQ, in a timely manner, any reasonable information that the Director may request in **writing** to determine whether cause exists for modifying, revoking and reissuing, or terminating the permit or to determine compliance with the permit.
- The Permittee shall furnish the DAQ copies of records required to be kept by the permit when such copies are requested by the Director. For information claimed to be confidential, the Permittee may furnish such records directly to the EPA upon request along with a claim of confidentiality.

N. **Duty to Supplement** [15A NCAC 02Q .0507(f)]

The Permittee, upon becoming aware that any relevant facts were omitted or incorrect information was submitted in the permit application, shall promptly submit such supplementary facts or corrected information to the DAQ. The Permittee shall also provide additional information as necessary to address any requirement that becomes applicable to the facility after the date a complete permit application was submitted but prior to the release of the draft permit.

O. **Retention of Records** [15A NCAC 02Q .0508(f) and 02Q .0508 (l)]

The Permittee shall retain records of all required monitoring data and supporting information for a period of at least five years from the date of the monitoring sample, measurement, report, or application. Supporting information includes all calibration and maintenance records and all original strip-chart recordings for continuous monitoring information, and copies of all reports required by the permit. These records shall be maintained in a form suitable and readily available for expeditious inspection and review. Any records required by the conditions of this permit shall be kept on site and made available to DAQ personnel for inspection upon request.

P. Compliance Certification [15A NCAC 02Q .0508(n)]

The Permittee shall submit to the DAQ and the EPA (Air and EPCRA Enforcement Branch, EPA, Region 4, 61 Forsyth Street SW, Atlanta, GA 30303) postmarked on or before March 1 a compliance certification (for the preceding calendar year) by a responsible official with all federally-enforceable terms and conditions in the permit, including emissions limitations, standards, or work practices. It shall be the responsibility of the current owner to submit a compliance certification for the entire year regardless of who owned the facility during the year. The compliance certification shall comply with additional requirements as may be specified under Sections 114(a)(3) or 504(b) of the Federal Clean Air Act. The compliance certification shall specify:

- 1. the identification of each term or condition of the permit that is the basis of the certification;
- 2. the compliance status (with the terms and conditions of the permit for the period covered by the certification);
- 3. whether compliance was continuous or intermittent; and
- 4. the method(s) used for determining the compliance status of the source during the certification period.

Q. Certification by Responsible Official [15A NCAC 02Q .0520]

A responsible official shall certify the truth, accuracy, and completeness of any application form, report, or compliance certification required by this permit. All certifications shall state that based on information and belief formed after reasonable inquiry, the statements and information in the document are true, accurate, and complete.

R. Permit Shield for Applicable Requirements [15A NCAC 02Q .0512]

- 1. Compliance with the terms and conditions of this permit shall be deemed compliance with applicable requirements, where such applicable requirements are included and specifically identified in the permit as of the date of permit issuance.
- 2. A permit shield shall not alter or affect:
 - a. the power of the Commission, Secretary of the Department, or Governor under NCGS 143-215.3(a)(12), or EPA under Section 303 of the Federal Clean Air Act;
 - b. the liability of an owner or operator of a facility for any violation of applicable requirements prior to the effective date of the permit or at the time of permit issuance;
 - c. the applicable requirements under Title IV; or
 - d. the ability of the Director or the EPA under Section 114 of the Federal Clean Air Act to obtain information to determine compliance of the facility with its permit.
- 3. A permit shield does not apply to any change made at a facility that does not require a permit or permit revision made under 15A NCAC 02Q .0523.
- 4. A permit shield does not extend to minor permit modifications made under 15A NCAC 02Q .0515.

S. Termination, Modification, and Revocation of the Permit [15A NCAC 02Q .0519]

The Director may terminate, modify, or revoke and reissue this permit if:

- 1. the information contained in the application or presented in support thereof is determined to be incorrect;
- 2. the conditions under which the permit or permit renewal was granted have changed;
- 3. violations of conditions contained in the permit have occurred;
- 4. the EPA requests that the permit be revoked under 40 CFR 70.7(g) or 70.8(d); or
- 5. the Director finds that termination, modification, or revocation and reissuance of the permit is necessary to carry out the purpose of NCGS Chapter 143, Article 21B.

T. <u>Insignificant Activities</u> [15A NCAC 02Q .0503]

Because an emission source or activity is insignificant does not mean that the emission source or activity is exempted from any applicable requirement or that the owner or operator of the source is exempted from demonstrating compliance with any applicable requirement. The Permittee shall have available at the facility at all times and made

available to an authorized representative upon request, documentation, including calculations, if necessary, to demonstrate that an emission source or activity is insignificant.

U. **Property Rights** [15A NCAC 02Q .0508(i)(8)]

This permit does not convey any property rights in either real or personal property or any exclusive privileges.

V. Inspection and Entry [15A NCAC 02Q .0508(l) and NCGS 143-215.3(a)(2)]

- 1. Upon presentation of credentials and other documents as may be required by law, the Permittee shall allow the DAQ, or an authorized representative, to perform the following:
 - a. enter the Permittee's premises where the permitted facility is located or emissions-related activity is conducted, or where records are kept under the conditions of the permit;
 - b. have access to and copy, at reasonable times, any records that are required to be kept under the conditions of the permit;
 - c. inspect at reasonable times and using reasonable safety practices any source, equipment (including monitoring and air pollution control equipment), practices, or operations regulated or required under the permit; and
 - d. sample or monitor substances or parameters, using reasonable safety practices, for the purpose of assuring compliance with the permit or applicable requirements at reasonable times.

Nothing in this condition shall limit the ability of the EPA to inspect or enter the premises of the Permittee under Section 114 or other provisions of the Federal Clean Air Act.

2. No person shall refuse entry or access to any authorized representative of the DAQ who requests entry for purposes of inspection, and who presents appropriate credentials, nor shall any person obstruct, hamper, or interfere with any such authorized representative while in the process of carrying out his official duties. Refusal of entry or access may constitute grounds for permit revocation and assessment of civil penalties.

W. Annual Fee Payment [15A NCAC 02Q .0508(i)(10)]

- 1. The Permittee shall pay all fees in accordance with 15A NCAC 02Q .0200.
- 2. Payment of fees may be by check or money order made payable to the N.C. Department of Environmental Quality. Annual permit fee payments shall refer to the permit number.
- 3. If, within 30 days after being billed, the Permittee fails to pay an annual fee, the Director may initiate action to terminate the permit under 15A NCAC 02Q .0519.

X. Annual Emission Inventory Requirements [15A NCAC 02Q .0207]

The Permittee shall report by **June 30 of each year** the actual emissions of each air pollutant listed in 15A NCAC 02Q .0207(a) from each emission source within the facility during the previous calendar year. The report shall be in or on such form as may be established by the Director. The accuracy of the report shall be certified by a responsible official of the facility.

Y. Confidential Information [15A NCAC 02Q .0107 and 02Q. 0508(i)(9)]

Whenever the Permittee submits information under a claim of confidentiality pursuant to 15A NCAC 02Q .0107, the Permittee may also submit a copy of all such information and claim directly to the EPA upon request. All requests for confidentiality must be in accordance with 15A NCAC 02Q .0107.

Z. Construction and Operation Permits [15A NCAC 02Q .0100 and .0300]

A construction and operating permit shall be obtained by the Permittee for any proposed new or modified facility or emission source which is not exempted from having a permit prior to the beginning of construction or modification, in accordance with all applicable provisions of 15A NCAC 02Q .0100 and .0300.

AA. Standard Application Form and Required Information [15A NCAC 02Q .0505 and .0507]

The Permittee shall submit applications and required information in accordance with the provisions of 15A NCAC 02Q .0505 and .0507.

BB. Financial Responsibility and Compliance History [15A NCAC 02Q .0507(d)(4)]

The DAQ may require an applicant to submit a statement of financial qualifications and/or a statement of substantial compliance history.

CC. Refrigerant Requirements (Stratospheric Ozone and Climate Protection) [15A NCAC 02Q .0501(e)]

- 1. If the Permittee has appliances or refrigeration equipment, including air conditioning equipment, which use Class I or II ozone-depleting substances such as chlorofluorocarbons and hydrochlorofluorocarbons listed as refrigerants in 40 CFR Part 82 Subpart A Appendices A and B, the Permittee shall service, repair, and maintain such equipment according to the work practices, personnel certification requirements, and certified recycling and recovery equipment specified in 40 CFR Part 82 Subpart F.
- 2. The Permittee shall not knowingly vent or otherwise release any Class I or II substance into the environment during the repair, servicing, maintenance, or disposal of any such device except as provided in 40 CFR Part 82 Subpart F.
- 3. The Permittee shall comply with all reporting and recordkeeping requirements of 40 CFR 82.166. Reports shall be submitted to the EPA or its designee as required.

DD. Prevention of Accidental Releases - Section 112(r) [15A NCAC 02Q .0508(h)]

If the Permittee is required to develop and register a Risk Management Plan with EPA pursuant to Section 112(r) of the Clean Air Act, then the Permittee is required to register this plan in accordance with 40 CFR Part 68.

EE. <u>Prevention of Accidental Releases General Duty Clause - Section 112(r)(1)</u> – FEDERALLY-ENFORCEABLE ONLY

Although a risk management plan may not be required, if the Permittee produces, processes, handles, or stores any amount of a listed hazardous substance, the Permittee has a general duty to take such steps as are necessary to prevent the accidental release of such substance and to minimize the consequences of any release.

FF. Title IV Allowances [15A NCAC 02Q .0508(i)(1)]

This permit does not limit the number of Title IV allowances held by the Permittee, but the Permittee may not use allowances as a defense to noncompliance with any other applicable requirement. The Permittee's emissions may not exceed any allowances that the facility lawfully holds under Title IV of the Federal Clean Air Act.

GG. Air Pollution Emergency Episode [15A NCAC 02D .0300]

Should the Director of the DAQ declare an Air Pollution Emergency Episode, the Permittee will be required to operate in accordance with the Permittee's previously approved Emission Reduction Plan or, in the absence of an approved plan, with the appropriate requirements specified in 15A NCAC 02D .0300.

HH. Registration of Air Pollution Sources [15A NCAC 02D .0202]

The Director of the DAQ may require the Permittee to register a source of air pollution. If the Permittee is required to register a source of air pollution, this registration and required information will be in accordance with 15A NCAC 02D .0202(b).

II. Ambient Air Quality Standards [15A NCAC 02D .0501(c)]

In addition to any control or manner of operation necessary to meet emission standards specified in this permit, any source of air pollution shall be operated with such control or in such manner that the source shall not cause the ambient air quality standards in 15A NCAC 02D .0400 to be exceeded at any point beyond the premises on which the source is located. When controls more stringent than named in the applicable emission standards in this permit are required to prevent violation of the ambient air quality standards or are required to create an offset, the permit shall contain a condition requiring these controls.

JJ. General Emissions Testing and Reporting Requirements [15A NCAC 02Q .0508(i)(16)]

Emission compliance testing shall be by the procedures of Section .2600, except as may be otherwise required in Rules .0524, .0912, .1110, .1111, or .1415 of Subchapter 02D. If emissions testing is required by this permit or the DAQ or if the Permittee submits emissions testing to the DAQ to demonstrate compliance, the Permittee shall perform such testing in accordance with 15A NCAC 02D .2600 and follow the procedures outlined below:

1. The owner or operator of the source shall arrange for air emission testing protocols to be provided to the Director prior to air pollution testing. Testing protocols are not required to be pre-approved by the Director prior to air pollution testing. The Director shall review air emission testing protocols for pre-approval prior to testing if requested by the owner or operator at least **45 days** before conducting the test.

- Any person proposing to conduct an emissions test to demonstrate compliance with an applicable standard shall notify the Director at least 15 days before beginning the test so that the Director may at his option observe the test.
- 3. The owner or operator of the source shall arrange for controlling and measuring the production rates during the period of air testing. The owner or operator of the source shall ensure that the equipment or process being tested is operated at the production rate that best fulfills the purpose of the test. The individual conducting the emission test shall describe the procedures used to obtain accurate process data and include in the test report the average production rates determined during each testing period.
- 4. Two copies of the final air emission test report shall be submitted to the Director not later than **30 days** after sample collection unless otherwise specified in the specific conditions. The owner or operator may request an extension to submit the final test report. The Director shall approve an extension request if he finds that the extension request is a result of actions beyond the control of the owner or operator.
 - a. The Director shall make the final determination regarding any testing procedure deviation and the validity of the compliance test. The Director may:
 - i. Allow deviations from a method specified under a rule in this Section if the owner or operator of the source being tested demonstrates to the satisfaction of the Director that the specified method is inappropriate for the source being tested.
 - ii. Prescribe alternate test procedures on an individual basis when he finds that the alternative method is necessary to secure more reliable test data.
 - iii. Prescribe or approve methods on an individual basis for sources or pollutants for which no test method is specified in this Section if the methods can be demonstrated to determine compliance of permitted emission sources or pollutants.
 - b. The Director may authorize the Division of Air Quality to conduct independent tests of any source subject to a rule in this Subchapter to determine the compliance status of that source or to verify any test data submitted relating to that source. Any test conducted by the Division of Air Quality using the appropriate testing procedures described in Section 02D .2600 has precedence over all other tests.

KK. Reopening for Cause [15A NCAC 02Q .0517]

- 1. A permit shall be reopened and revised under the following circumstances:
 - a. additional applicable requirements become applicable to a facility with remaining permit term of three or more years;
 - b. additional requirements (including excess emission requirements) become applicable to a source covered by Title IV;
 - c. the Director or EPA finds that the permit contains a material mistake or that inaccurate statements were made in establishing the emissions standards or other terms or conditions of the permit; or
 - d. the Director or EPA determines that the permit must be revised or revoked to ensure compliance with the applicable requirements.
- Any permit reopening shall be completed or a revised permit issued within 18 months after the applicable requirement is promulgated. No reopening is required if the effective date of the requirement is after the expiration of the permit term unless the term of the permit was extended pursuant to 15A NCAC 02Q .0513(c).
- 3. Except for the state-enforceable only portion of the permit, the procedures set out in 15A NCAC 02Q .0507, .0521, or .0522 shall be followed to reissue the permit. If the State-enforceable only portion of the permit is reopened, the procedures in 15A NCAC 02Q .0300 shall be followed. The proceedings shall affect only those parts of the permit for which cause to reopen exists.
- 4. The Director shall notify the Permittee at least 60 days in advance of the date that the permit is to be reopened, except in cases of imminent threat to public health or safety the notification period may be less than 60 days.
- 5. Within 90 days, or 180 days if the EPA extends the response period, after receiving notification from the EPA that a permit needs to be terminated, modified, or revoked and reissued, the Director shall send to the EPA a proposed determination of termination, modification, or revocation and reissuance, as appropriate.

LL. Reporting Requirements for Non-Operating Equipment [15A NCAC 02Q .0508(i)(16)]

The Permittee shall maintain a record of operation for permitted equipment noting whenever the equipment is taken from and placed into operation. When permitted equipment is not in operation, the requirements for testing, monitoring, and recordkeeping are suspended until operation resumes.

MM. Fugitive Dust Control Requirement [15A NCAC 02D .0540]

As required by 15A NCAC 02D .0540 "Particulates from Fugitive Dust Emission Sources," the Permittee shall not cause or allow fugitive dust emissions to cause or contribute to substantive complaints or excess visible emissions beyond the property boundary. If substantive complaints or excessive fugitive dust emissions from the facility are observed beyond the property boundaries for six minutes in any one hour (using Reference Method 22 in 40 CFR, Appendix A), the owner or operator may be required to submit a fugitive dust plan as described in 02D .0540(f).

"Fugitive dust emissions" means particulate matter from process operations that does not pass through a process stack or vent and that is generated within plant property boundaries from activities such as: unloading and loading areas, process areas, stockpiles, stock pile working, plant parking lots, and plant roads (including access roads and haul roads).

NN. Specific Permit Modifications [15A NCAC 02O .0501 and .0523]

- 1. For modifications made pursuant to 15A NCAC 02Q .0501(b)(2), the Permittee shall file a Title V Air Quality Permit Application for the air emission source(s) and associated air pollution control device(s) on or before 12 months after commencing operation.
- For modifications made pursuant to 15A NCAC 02Q .0501(c)(2), the Permittee shall not begin operation of
 the air emission source(s) and associated air pollution control device(s) until a Title V Air Quality Permit
 Application is filed and a construction and operation permit following the procedures of Section .0500
 (except for Rule .0504 of this Section) is obtained.
- 3. For modifications made pursuant to 502(b)(10), in accordance with 15A NCAC 02Q .0523(a)(1)(C), the Permittee shall notify the Director and EPA (EPA Air Planning Branch, 61 Forsyth Street SW, Atlanta, GA 30303) in writing at least seven days before the change is made. The written notification shall include:
 - a. a description of the change at the facility;
 - b. the date on which the change will occur;
 - c. any change in emissions; and
 - d. any permit term or condition that is no longer applicable as a result of the change.

In addition to this notification requirement, with the next significant modification or Air Quality Permit renewal, the Permittee shall submit a page "E5" of the application forms signed by the responsible official verifying that the application for the 502(b)(10) change/modification, is true, accurate, and complete. Further note that modifications made pursuant to 502(b)(10) do not relieve the Permittee from satisfying preconstruction requirements.

OO. Third Party Participation and EPA Review [15A NCAC 02Q .0521, .0522 and .0525(7)]

For permits modifications subject to 45-day review by the federal Environmental Protection Agency (EPA), EPA's decision to not object to the proposed permit is considered final and binding on the EPA and absent a third party petition, the failure to object is the end of EPA's decision-making process with respect to the revisions to the permit. The time period available to submit a public petition pursuant to 15A NCAC 02Q .0518 begins at the end of the 45-day EPA review period.

ATTACHMENT

List of Acronyms

AOS Alternate Operating Scenario

BACT Best Available Control Technology

Btu British thermal unit CAA Clean Air Act

CAIR Clean Air Interstate Rule
CEM Continuous Emission Monitor
CFR Code of Federal Regulations
DAQ Division of Air Quality

DEQ Department of Environmental QualityEMC Environmental Management Commission

EPA Environmental Protection Agency

FR Federal Register

GACT Generally Available Control Technology

HAP Hazardous Air Pollutant

MACT Maximum Achievable Control Technology

NAA Non-Attainment Area

NCAC North Carolina Administrative Code NCGS North Carolina General Statutes

NESHAP National Emission Standards for Hazardous Air Pollutants

NO_X Nitrogen Oxides

NSPS New Source Performance Standard OAH Office of Administrative Hearings

PM Particulate Matter

PM₁₀ Particulate Matter with Nominal Aerodynamic Diameter of 10 Micrometers or Less

POS Primary Operating Scenario

PSD Prevention of Significant DeteriorationRACT Reasonably Available Control Technology

SIC Standard Industrial Classification

SIP State Implementation Plan

SO₂ Sulfur Dioxide tpy Tons Per Year

VOC Volatile Organic Compound